MacWEEK

20 February 1990 Vol. 4 No. 7 W O R K S T A T I O N N E W S

Apple tunes in to clamor for econo Macs

NEWS ANALYSIS

By Daniel Farber

Cupertino, Calif. — Apple's recent earnings slide and management shake-up have focused attention on the company's failure to deliver low- and intermediate-cost versions of the Macintosh into a market increasingly tempted by inexpensive yet powerful IBM PC clones.

These concerns are nothing new, however, and Apple has been pursuing a carefully planned three-prong strategy to shore up its Mac product line with new compact and modular models while also phasing out its Apple II business, according to sources close to the company.

The new models are needed to replace revenues from declining sales of the current compact Macs, the Plus and SE. Projections by Goldman, Sachs, the New York investment company, show Plus and SE sales dropping 37 percent in 1990.

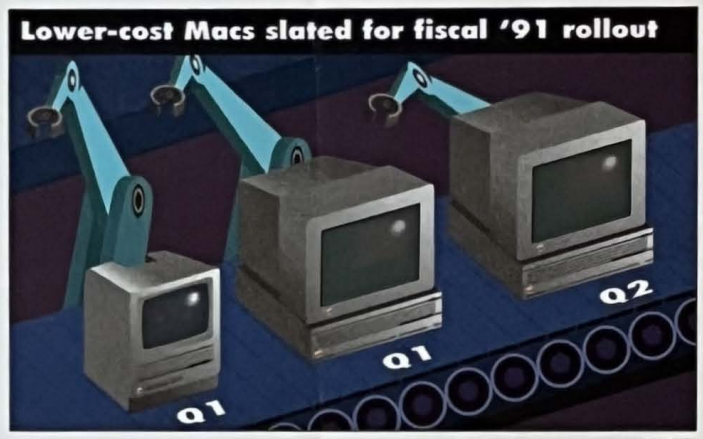
The new low-end models have been slow in coming because of interdepartmental disagreements, however. Apple CEO John Sculley two weeks ago told analysts that the company would not offer a new lower-cost Macintosh in this fiscal year, which ends Sept. 30.

"Apple's failure to extend the low end of the Macintosh is a case of indecisiveness. Sales and marketing, which suffered from constantly changing management, and product development couldn't agree on what to do about the low end, so they just sacrificed it," said Ash Jain, publisher of the Macintosh Market Report in Irvine, Calif.

According to the pre-shake-up timetable, the first fruits of Apple's low-end strategy — a lower-cost replacement for the Mac Plus and SE and a midprice color Macintosh built in a new modular case — were to have seen the light of day during the first quarter of fiscal 1991.

With the appointment of Michael

See Low cost, Page 9



KEVIN BERGER

Mac managers take Apple turmoil in stride

But delays could shake confidence

By John Battelle

Cupertino, Calif. — A non-stop barrage of news about Apple's travails has left Mac managers worried but confident about the company's future course.

Reports of lowered sales projections, the departure of Apple USA President Allan Z. Loren, the expected resignation of Apple Products President Jean-Louis Gassée, the battering that Apple shares have taken on Wall Street, and looming cutbacks and layoffs have corporate buyers reappraising the company that many of them have long defended as an alternative computing solution. But so far, none of those contacted indicated that they plan to defect to the DOS, OS/2 or Unix camps.

"I think this represents a maturing corporate mentality rather than a surprise," said Dave Grubman, vice president of American International Marketing Systems in New York. "The economy in general is slowing down, and Apple is taking the steps any

See Apple, Page 9

ImageWriter II printer gets remake on the sly

By Pamela Pfiffner

Cupertino, Calif. — Apple is quietly replacing the current ImageWriter II with a new model that is easier to repair but provides no major performance enhancements, according to service technicians who have seen the product's specifications.

Apple plans no formal announcement of the revamped dot-matrix printer, which is called the ImageWriter II/L. It will not ship until the existing stock of ImageWriter IIs is sold.

"We are not planning a product introduction or name change for the new version because the look

See ImageWriter, Page 10

C-Cube puts squeeze on color images

By Connie Guglielmo

San Jose, Calif. — Breaking down the storage barriers that have made color publishing on the desktop an unwieldy proposition, C-Cube Microsystems Inc. this week unveiled breakthrough technology in the form of a highly integrated chip that compresses color images on the fly at ratios of up to 200-to-1.

The C-Cube CL550-10, a VLSI (very large-scale integration) chip with a 10-MHz clock speed, is capable of compressing a 25-Mbyte continuous-tone color image in about a second at an average ratio of 20-to-1 without visible loss of image quality, according to Alain Rossmann, vice president of marketing.

A 27-MHz version, the CL550-27, is capable of compressing full-motion color video in real time (30 frames per second) at similar ratios.

See C-Cube, Page 10

JANET TANAKA

The team leading C-Cube Microsystems' development of new compression and decompression technology includes (from left to right) Ed Sun, Jim Rafferty, Alain Rossmann and Alex Balkanski.

Microsoft drafts new license

Volume buyers need only one copy

By Daniel Farber

Redmond, Wash. — Microsoft Corp. last week announced the Microsoft License Pak, an innovative means of distributing software to volume purchasers of the company's major software products.

The License Pak program replaces the company's previous licensing agreement, which stipulated that each user, or licensee, purchase a shrink-wrapped copy of the software complete with documentation.

The new licensing arrangement requires volume purchasers to buy only one shrink-wrapped copy of an application; License Paks can be purchased to cover the remainder of the users. Corporations can distribute software over networks, on hard disks, on CD-ROMs or

See Microsoft, Page 9

LATE NEWS

Gassée not passé yet, but 500 others are

Cupertino, Calif. — At press time the Jean-Louis Gassée saga was still unresolved. Apple is expected to announce his formal resignation as president of Apple Products soon, but sources close to the company confirmed that he would remain at the company in some other capacity until the end of the fiscal year. Gassée and Apple officials declined to comment on the report.

Last Thursday CEO John Sculley sent an electronic message to Apple employees to address the proliferation of rumors circulating throughout the company. His message stated that 400 to 500 employees worldwide would be laid off this week. Sources said the majority of layoffs would occur in the marketing arm of the company.

Apple employees are still rattled nearly three weeks after the recent reorganization. "It's hard to be productive in this environment," said one Apple employee. "Most people just want to get it over with and get on with the work." □

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Portable gets monitor hookup

By John Battelle

Sunnyvale, Calif. — A new video board announced last week by Generation X Technologies Inc. will for the first time give Macintosh Portable users the option of connecting the mobile machine to any of Apple's monochrome monitors.

Called the Portable Publisher, the board drives the Apple 14-inch monochrome monitor at 640 pixels by 480 pixels, the Apple 15-inch portrait monitor at 640 pixels by 870 pixels, and the Apple 21-inch display at 1,152 pixels by 870 pixels. The card provides a vertical refresh rate of 75 Hz and a horizontal rate of 68.7 kHz.

The card, which installs in the Portable's single processor-direct slot, makes extensive use of gate-array technology, according to Generation X. It automatically senses the monitor to which it is connected and configures itself accordingly. Software included with the card provides pop-up menus, a screen saver, cursor and menu bar-enlargement options.

The Portable Publisher will ship in late March for $649 with a one-year warranty, the company said.

When the Mac Portable was released last September, Apple announced its intention to provide an external adapter that would support some external monitors, but the company has released neither detailed specifications nor information about pricing and availability.

Generation X Technologies Inc. is located at 333 W. El Camino Real, Suite 310, Sunnyvale, Calif. 94087; (408) 739-4570. □

Evolution: Type 3 to Type 1

By Pamela Pfiffner

Calgary, Alberta — Image Club Graphics Inc. has scheduled a mid-March release for a utility that converts Type 3 PostScript fonts into Type 1 Adobe PostScript format.

Called Evolution, the $99 application can transform Type 3 fonts generated in Altsys Corp.'s Fontographer, such as Type 3 fonts from Image Club and Casady & Greene, into Type 1 fonts. The program also can convert Type 1 to Type 3 fonts for use in programs that do not yet accept Type 1 fonts, such as Custom Applications Inc.'s Freedom of Press interpreter.

Because fonts converted by Evolution into Type 1 are compatible with Adobe Type Manager, they can be used with non-PostScript printers, PostScript devices and Emerald City Software's TypeAlign.

Image Club created Evolution to convert its library of 613 fonts into the Type 1 format in anticipation of Adobe System Inc.'s release of Type 1 specifications this quarter.

Image Club Graphics Inc. is located at 1902 11th St. S.E., Suite 5, Calgary, Alberta, T2G 3G2 Canada; (403) 262-8008. □

Adobe cuts Photoshop ribbon

Mountain View, Calif. — Although it shipped just last week, Adobe Systems Inc.'s Photoshop may already have a larger installed base than most other Mac graphics programs on the market.

Prerelease versions of the $895 32-bit color image-processing program already have been in use for the past year at graphics firms, magazines and newspapers throughout the country (see MacWEEK, Oct. 3, 1989, and Nov. 21, 1989).

Photoshop provides retouching and painting tools for creating images and editing scanned gray-scale and 24-bit color images. Features include an eight-bit alpha channel for generating masks, a four-color separation utility, an airbrush, an anti-aliasing brush, a rubber stamp that clones parts of images, specialized selection tools, and Transform tools for image editing.

The program also converts color images to black and white and gray-scale images into halftones.

Adobe Systems Inc. is located at 1585 Charleston Road, Mountain View, Calif. 94039; (415) 961-4400; (800) 344-8335. □

Adobe Systems' Photoshop, a 32-bit color image-processing program, provides tools for creating images and for editing scanned photographs.

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Reference, Lifetree bring grammar checkers to Mac

By Henry Norr

San Francisco — Grammar and style checking has long been a quiet corner of the Macintosh software market, but programs arriving this month from two leaders in the field on the MS-DOS side could change all that.

▶ Reference Software International this month began shipping Grammatik Mac, a $99 application that checks files for readability, spelling, and 42 classes of grammatical and stylistic errors, ranging from double negatives to long-winded phrases.

The program lets users select from five preset style standards — general, business, technical, fiction and informal — or develop custom guidelines. It also offers a variety of statistical evaluations, plus a graphic display comparing the document's readability to the Gettysburg Address, Hemingway's "Snows of Kilimanjaro," an insurance policy or a user-selected document.

Contrary to previous announcements, the release version directly reads Word 3.0 and 4.0 files; WordPerfect, MacWrite 4.5 or later and MacWrite II files; and plain-text or Rich Text Format documents from other programs. Corrections can be made from within Grammatik Mac's windows without losing formatting or changing the file format of the document .

▶ Lifetree Software Inc. will release Correct Grammar 1.0 for the Mac later this month. Developed in collaboration with Working Software Inc. of Santa Cruz, Calif., the $79 Mac application can directly read files in a long list of formats, including Microsoft Word and Works; MacWrite and MacWrite II; WriteNow; Acta and Acta Advantage; AppleLink; and ASCII text.

Correct Grammar incorporates artificial-intelligence technology and a 135,000-word spelling dictionary from Houghton Mifflin. It can also share user dictionaries with Microsoft Word. Like Grammatik Mac, the Lifetree program offers a variety of customization options and allows in-context editing without changing file formats. Correct Grammar also provides a unique capability to flag any sentence that flunks a user-specified length and readability standard.

Camilo Wilson, Lifetree chairman, said that while Reference's product incorporates more stylistic considerations, his is designed to deliver more depth and precision, with fewer false alarms, in checking fundamentals.

Reference Software International is at 330 Townsend St., Suite 123, San Francisco, Calif. 94107; (415) 541-0222.

Lifetree Software Inc. is at 33 New Montgomery St., Suite 1260, San Francisco, Calif. 94105; (415) 541-7864. □

Smoothing rough spots

"When Grammatik Mac told me my marketing brochure read like an insurance policy, I knew I had a problem," said Earl McEwen, a partner at Hood and Strong Certified Public Accountants of San Francisco. "It's very helpful in pointing out patterns like overusing the passive voice, but it's the kind of program I expect to use once in a while to check up on myself rather than every day."

"No program can really do your proofreading for you," said Steve Kolb, public-affairs officer for the Contractors State Licensing Board in Sacramento, Calif., "but Correct Grammar is great for raising flags. It's made me think more clearly about the structure of my sentences for the audience I am addressing."

Kolb uses the program to help him smooth out the rough edges in articles submitted for a quarterly bulletin that is distributed to 250,000 licensed contractors. A beta tester of both Grammatik Mac from Reference Software International and Lifetree Software Inc.'s Correct Grammar, he said he much prefers Lifetree's program because it can flag individual sentences for readability and because "its interface is slicker, tighter, more accessible."

Other Grammatik Mac beta testers also expressed appreciation for the program's power and configurability, but some are uneasy about its user interface.

"I like what it does, and it pulled up some pretty good suggestions, but the interface really is terrible," said Ron Rice, administrative projects manager at the Springer Clinic, a medical group practice in Tulsa, Okla. He complained that Grammatik Mac's many non-movable modal windows fill the entire window, even on large screens. — *By Henry Norr*

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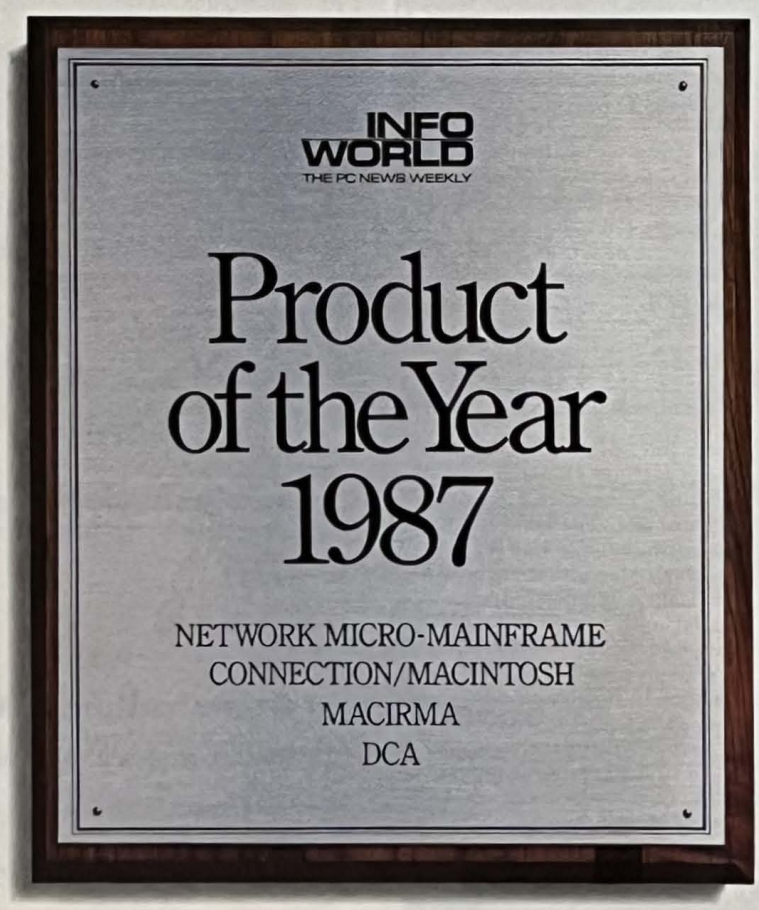

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MicroNet cuts data storage prices

By Henry Norr

Irvine, Calif. — MicroNet Technology Inc. last week announced substantial price cuts on many of its Mac data-storage products.

The suggested retail price of MicroNet's MR-45 SyQuest removable cartridge system dropped $300 to $1,195; the company's MP-40p portable hard drive dropped $206 to $789; and the MP-20, -30 and -46 transportable hard drives dropped $50 each to $589, $639 and $689, respectively.

MicroNet also lowered prices on several internal models. The SE-200x, a 200-Mbyte unit for the Mac SE, is now priced at $2,100, down $100. The IIcx/ci-173, a 173-Mbyte, 5.25-inch Wren V drive with special brackets for the three-slot Macs, dropped $100 from $2,245 to $2,145, while the IIcx/IIci-404, a 404-Mbyte Wren VI internal drive, dropped $300 to $4,395.

As for external drives, MicroNet's SB-330, a 330-Mbyte Wren Runner external, dropped $200 to $4,195, and the SB-1000, a 1-Gbyte Wren VII unit, was reduced $1,155 to $9,195. The MicroNet SBT-1174, which offers a pair of "spliced" 600-Mbyte Wren V drives, dropped $400 to $9,390, while the 2-Gbyte SBT-2022 dual drive went from $20,700 to $18,390.

MicroNet Technology Inc. is at 20 Mason, Irvine, Calif. 92718; (714) 837-6033. □

HP plans AppleTalk, PS for LaserJet III

By Henry Norr

Palo Alto, Calif. — Hewlett-Packard Co. is expected to unveil a new generation in its LaserJet printer family next week, and sources familiar with the products' details said the announcement could be a breakthrough in the Mac printer market.

The new LaserJet III series will start with a single-user, non-PostScript model priced at less than $2,400 and targeted primarily at the IBM PC and compatible market. But HP will also offer an AppleTalk interface kit for the first time as well as a cartridge that incorporates Adobe PostScript. The AppleTalk kit, sources said, will require the PostScript cartridge.

The cost of the two upgrade components together is expected to be less than $1,000. HP's aggressive pricing, along with the deep discounting prevalent among LaserJet dealers, will mean stiff competition for Apple's $4,999 LaserWriter IINT. "Apple should be really scared," said one source. "It's a very impressive machine."

The printer reportedly uses a 300-dpi engine, along with proprietary techniques that boost effective resolution.

Third-party companies are expected to offer products that will open the single-user LaserJet III to the Mac.

The printers reportedly incorporate PCL5, a powerful new version of HP's Printer Control Language. The new version is said to support an array of features that could make it a viable alternative to PostScript for some applications in the IBM PC-compatible world, including built-in Compugraphic outline fonts and vector and bit-map graphics. □

Hayes catches bug, pushes V-series update

By Carolyn Said

Atlanta — Hayes Microcomputer Products Inc. last week announced a new release of the firmware for its V-series modems, warning owners of the previous version of a potentially significant bug and inviting buyers of older modems in the series to take advantage of an opportunity to boost their modem's performance at a low cost.

The Version 4 firmware, which was first released in December, adds support for the newer V.42bis standard and MNP (Microcom network protocol) Level 5 compression. The 4.01 firmware fixes a recently discovered bug in the 4.00 release that may cause errors and disconnections, the company said.

A spokeswoman said Hayes is "strongly encouraging" even 4.00 users who have not experienced problems to upgrade, because the new release is not compatible with the 4.00 firmware. The upgrade is free to 4.00 owners. Distributors are now carrying only the 4.01 version, the company said.

Hayes also urged owners of V-series modems with pre-4.00 firmware — including the popular V-series Smartmodem 2400 and 9600 models — to upgrade to Version 4.01. Because it adds support for V.42bis, which offers up to 4-to-1 compression, the upgrade will give a 2,400-bps modem the throughput of a 9,600-bps modem, Hayes said. For owners of the earlier V-series products, the upgrade is either free or $50, depending on purchase date.

Hayes can be reached at P.O. Box 105203, Atlanta, Ga. 30348; (404) 441-1617. □

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Net vendors bridge Mac-PC gap

Twisted-pair Ether wins endorsements

RICK FRIEDMAN/BLACK STAR

Can you find the Macintosh? Neither could many of the attendees at last week's NetWorld show in Boston, which was dominated by IBM PC-based networking products.

By Stephen Howard

Boston — In the world of LANs, the Macintosh is just another node. But in the wake of several announcements and demonstrations of future products made here at NetWorld, a Mac node's chance of coexisting on networks running IBM PC-oriented services is slowly increasing.

▶ cc:Mail Inc. shipped the $1,995 cc:Fax, which lets users send, receive and view Group 3 faxes via electronic mail. The fax gateway requires an IBM PC with a fax board and works in conjunction with Version 1.1 of the cc:Mail LAN Package for Mac.

▶ Newbridge Networks Corp. unbundled its PC♥Mac software for Macs and IBM PCs. In conjunction with the company's MainStreet data controllers or another serial connection, the desk accessory-based software makes sharing peripherals and files possible. PC♥Mac costs $350 for 16 users.

▶ Spectrum Concepts Inc. announced that XCOM 6.2 for the Mac, an Advanced Program-to-Program Communications and LU 6.2-compliant file transfer and remote printing application for use over token-ring and synchronous data link control connections, will ship next month for $495.

▶ Dynamic Microprocessor Associates Inc. announced pcMACTERM II and pcMACTERM II/Network, enhanced versions of its IBM PC-to-Mac screen-sharing programs that also allow bidirectional file transfers and interactive chatting. Both versions will ship in April, at $195 and $395, respectively.

▶ WordPerfect Corp. showed WordPerfect Office 1.0 for the Macintosh. When it ships in June for an estimated price of $495 for five users, the package will include E-mail, scheduling and calendar services.

▶ Consumers Software Inc. demonstrated a Mac client version of The Network Courier 2.0 E-mail package. It will ship within two to three months at $595 per shared message base.

The overwhelming hardware trend of the show was vendor support for the draft 10BASE T standard for running Ethernet over unshielded twisted-pair wiring. NetWorth Inc. and Racal Interlan introduced 10BASE T-compatible cards for the Mac, and David Systems Inc. announced that it will ship the VolksNet, a 12-port, 10BASE T-compatible intelligent Ethernet hub, on March 1 for $1,195. □

Somak announces Works challenger

Encinitas, Calif. — Somak Software Inc. this month announced Unity, an integrated software package that it said will compete with Microsoft Works and Ragtime USA's Ragtime.

Somak said it anticipates a third-quarter release for the still-unpriced program.

Unity combines word processing, spreadsheet, painting and drawing, database, and page-layout functions in a single application. According to Somak President Robert Eberhardt, it is superior to Works, the longtime leader of Mac-integrated software in the United States, and has qualities similar to those of Ragtime 3, the best-selling European package that began shipping in this country last month.

Eberhardt declined to provide details on the grounds that the product is in the early stages of development, but he said Somak will demonstrate Unity during April's Macworld Expo in San Francisco.

Somak Software Inc. is located at 535 Encinitas Blvd., Suite 113, Encinitas, Calif. 92024; (619) 942-2556; (800) 842-5020. □

Monotype adds Classic Fonts

By Pamela Pfiffner

Chicago — Monotype Typography Inc. is releasing its Type 3 font library in a new format called Classic Fonts that is based on technology licensed from Adobe Systems Inc.

Classic Fonts is similar to Adobe's Type 1 hinted fonts, but the format retains Monotype's outline.

Classic Fonts was developed so the company could take advantage of the Adobe Type Manager utility and offer better screen display, according to Jeff Level, type director at Monotype. The new format also produces better output on low-resolution printers and better type resolution at smaller point sizes.

Classic Fonts also give users immediate access to Type 1 attributes rather than making them wait for Monotype's fully hinted typefaces to become available. That should happen over the next year, Level said.

With the introduction of its Classic Fonts format earlier this month, Monotype began phasing out its Type 3 fonts. The format will still be available to OEMs and as a special order for those who use software that doesn't yet accept the Type 1 format.

Registered owners of Monotype's Type 3 fonts will be able to upgrade to the Classic Fonts format at a cost equal to the difference between the price of the original package and the new Classic Fonts package.

Monotype Typography Inc. is located at 53 W. Jackson Blvd., Suite 504, Chicago, Ill. 60604; (312) 855-1440. □

Olduvai gets rights to revamped color paint program

By Connie Guglielmo

South Miami, Fla. — Olduvai Corp. last week announced that it has acquired rights to VideoPaint, a reincarnated version of the GraphistPaint color paint program formerly distributed by the now-defunct Aba Software Inc.

VideoPaint, priced at $495, is scheduled to ship at the San Francisco Macworld Expo in April. It was developed by Paris-based G+M Technologies, authors of the original GraphistPaint, according to Juan Chotsourian, Olduvai president.

The eight-bit color paint program incorporates a variety of advanced features, notably 40 special effects and an open architecture that lets developers write new effects and add direct controls for input and output devices. Add-ins can be written in Pascal, C or assembly language.

Other features include stencil and mask tools for combining effects and images, color separation capabilities, and the ability to create 3-D wire-frame objects and render them using adjustable light sources and shading options. For retouching images, the program offers anti-aliasing, water-drop, distort and rotate tools.

VideoPaint will import files in MacPaint, PICT, PixelPaint and TIFF formats, as well as export Encapsulated PostScript, gray-scale PostScript and PostScript CMYK (cyan, magenta, yellow, black) files, the company said.

Olduvai is offering a trade-in for users of other Macintosh color paint or draw programs. Users who send in their original program master disk before June 30 can purchase VideoPaint for $205.

Original GraphistPaint owners in the United States and Canada can upgrade to VideoPaint for $105, the company said.

VideoPaint requires a Mac II series machine with a minimum of 2 Mbytes of RAM.

Olduvai Corp. is at 7520 Red Road, Suite A, South Miami, Fla. 33143; (305) 665-4665. □

Olduvai plans an April release for VideoPaint, its new color paint and image-editing program. VideoPaint offers special-effects tools and an open architecture, which allow developers to add functionality to the $495 program.

For the Record

Last week MacWEEK listed an incorrect toll-free number for Andyne Computing Ltd., the developer of Graphical Query Language. The correct number is (800) 267-0665.

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PC WEEK

Oracle for Mac Solves DBMS Puzzle

SQL/HyperCard Combo Produces Sophisticated Applications

By Susan Janus

Database giant Oracle Corp., of Belmont, Calif., recently rounded out the list of platforms supported by the company's relational database-management system (DBMS) with the release of Oracle for Macintosh.

The new Mac DBMS teams the power of Oracle's Structured Query Language (SQL) with HyperCard's customizable and easy-to-use interface.

This combination allows Mac developers to create sophisticated applications that appear simple to users—a unique software-development opportunity unavailable on any other platform, including the PC, according to early corporate users we contacted.

In addition, users said, the network version of Oracle for the Mac allows the advantages of the HyperCard interface to serve as a front end to existing corporate relational databases residing on other platforms, such as mainframes and minicomputers.

Consequently, the Mac software has great potential for [illegible]

oping database-management systems to connect departmental Macs to larger systems. Jeff Menz, a systems analyst for a scientific R and D organization, is currently using Oracle for Macintosh to develop a system that will give the company's numerous Mac users access to an Oracle database running on a VAX. Using the networking version, Menz will link departmental AppleTalk networks to the VAX over a TCP/IP network.

Oracle Provides the Groundwork

The key benefit of Oracle's product is that "all the fundamental technical work—the protocols, the compatibility with the AppleTalk network—has been done by Oracle," Menz said. "I just have to build the HyperCard interface and do the database design work."

The result will be an Oracle relational database application on the VAX with a HyperCard front end that Mac users feel comfortable with, he explained. Also, the company will have one logical relational database instead of numerous fragmented local databases. This allows tighter security, improved data integrity and better performance, he added.

Oracle for Macintosh

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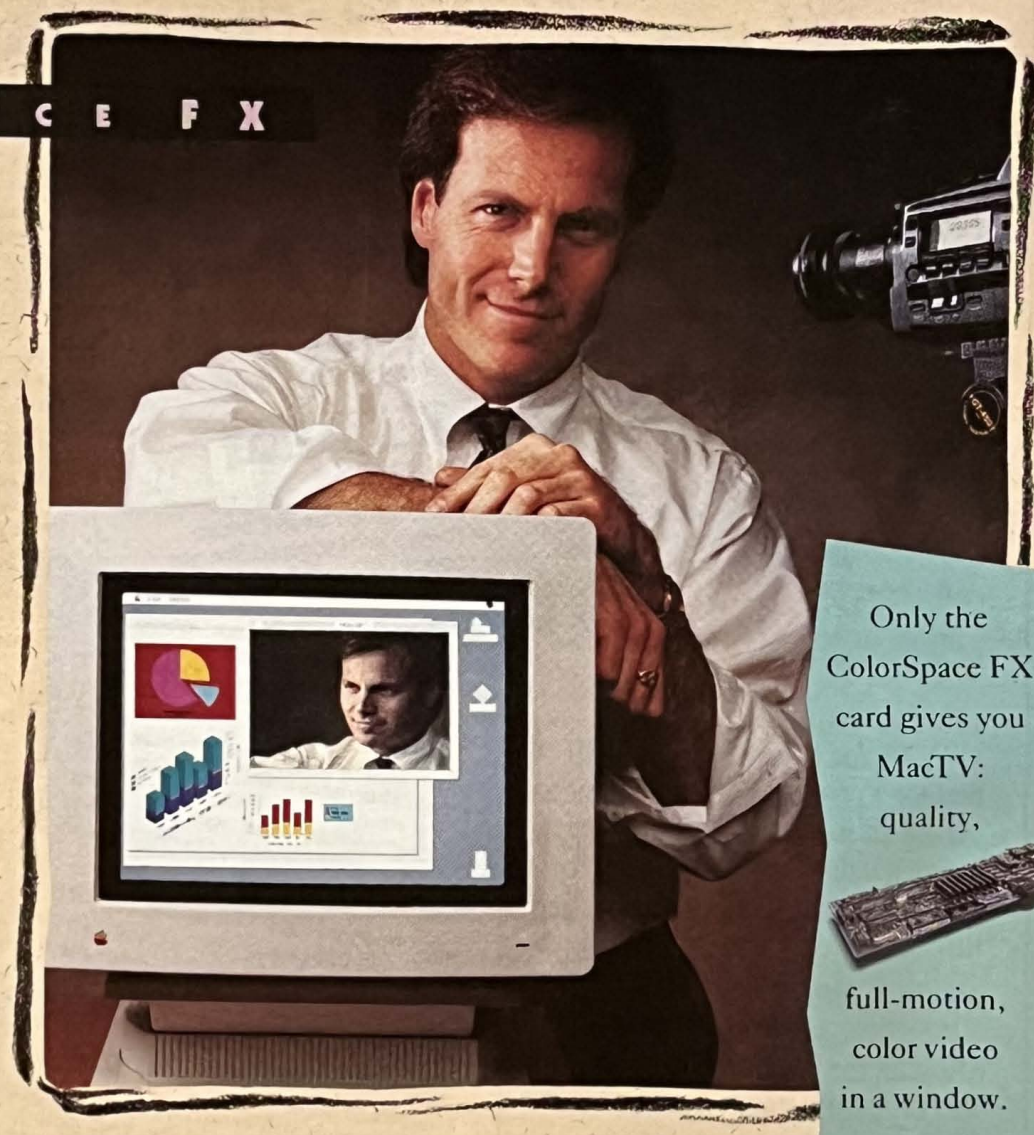

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Apple employees rally for embattled Gassée

DRAKE SORLY

Some 200 Apple employees, along with a full complement of reporters and photographers, turned out Feb. 9 for a Jean-Louis Gassée Appreciation Rally at Apple's Cupertino campus. Held near a Friday afternoon employee beer bash, the rally was strong on spirit, but sources close to Gassée said he still intends to resign as Apple Products president.

Low cost

From Page 1

Spindler as chief operating officer, product plans and delivery dates are being reassessed, sources said. But barring a reversal of previous plans, an October introduction remains likely for a redesigned entry-level compact Mac and a new 68030-powered modular machine priced in the $3,000-to-$4,500 range, sources said.

▶ The new compact Mac is expected to use the same 8-MHz 68000 central processor and built-in 9-inch, 512-by-342-pixel black-and-white screen as the Mac Plus and SE. The base machine, which could cost less than $1,000 with dealer discounting, reportedly uses a modified Mac SE 256-Kbyte ROM and includes an FDHD SuperDrive. It will be unable to exploit some of the new features that System 7.0 will offer, such as virtual memory.

▶ The new modular color machine is said to be housed in a 4-inch-high case, similar to that of the Apple IIGS. It will be based on a 16-MHz 68030, the same processor as in the Mac IIcx.

Other features expected in the new machine are on-board eight-bit color video, a single expansion slot that accommodates a NuBus card or a 68030 direct slot card, and a new custom chip that allows for eight-bit digitized sound input. The 68882 floating-point coprocessor will be optional.

The machine will be optimized for System 7 and should perform typical operations about four times faster than a Mac Plus.

The target retail price for a unit with 2 Mbytes of RAM and a 40-Mbyte hard disk is about $4,000, sources said. A Mac IIcx with 1 Mbyte of RAM and a 40-Mbyte hard disk now has a suggested retail price of $5,369.

▶ Apple also is expected to introduce in January of next year a low-cost color machine aimed at the collapsing Apple II market. The unit reportedly will be housed in the new modular, 4-inch-high box and include on-board four-bit color. It will likely be able to be booted over a network and will include one expansion slot. A version with 1 Mbyte of RAM and a floppy drive is expected to have a suggested retail price of less than $2,000, sources said.

Apple II users and developers are concerned that investments in Apple II software will be lost when Apple introduces a Macintosh that serves the K-12 education market better than current models.

Apple has plans to introduce a board for the low-cost color Mac that emulates an Apple IIe, sources said. "If Apple plans to transition Apple II users to the Mac, they should provide a way for the Mac to double as an Apple II so as not to abandon the installed base completely," said William Low, a consultant to Macintosh and Apple II developers. □

Microsoft

From Page 1

by any other method they choose.

The License Paks will be available through U.S. resellers in mid-March, according to Scott D. Oki, Microsoft's senior vice president of U.S. sales and marketing.

"We've been working on the License Pak concept for a few years with corporate accounts," said Oki. "It eliminates the need for stockpiles of manuals and disks, so we can pass about a 20 percent cost savings on to the customer."

Microsoft Excel, for example, has a suggested retail price of $395; the License Pak will list for $320 per user, but discount resellers are expected to offer it for $250 or less.

The new program covers PowerPoint, Excel, Word and Works for the Mac, as well as versions of Word, Excel and Windows for Intel-based machines. Documentation for the Mac products will be available separately for $55, except for Works, whose documentation is $45. Future upgrades will also be available in License Pak format.

"The Microsoft License Pak program will greatly simplify my staff's ability to support our personal computer users," said Arthur Block, vice president of Manufacturer's Hanover Trust Co. of New York. "Under the old system, I needed a warehouse to keep the disks and manuals that were not distributed."

Resellers have roundly endorsed the program, according to Oki. "I expect that other software vendors will begin offering licensing programs similar to ours."

Microsoft also provides a master registration agreement, with a 250-user minimum, that lets companies distribute copies of the software and report the number of new licensees every two months.

The company also modified its domestic home-user license agreement, allowing customers to copy a Microsoft application on either a portable or home computer without an additional license. □

Apple

From Page 1

company needs to take to improve its bottom line."

"Apple's is not the only stock going down," said Dirk Warschewski, senior computer consultant at Colgate Palmolive in Piscataway, N.J.

Although confident Apple will weather what may be one of the most intense squalls in its often stormy history, buyers were quick to point out the mother ship's shortcomings and what could be done about them.

"Innovation has not kept pace with price," said an engineer at a major aerospace company, echoing the calls of many managers and analysts for a $2,500 68030-based color machine. The need for such a platform is even more urgent, they said, in light of competition from Windows 3.0 and other graphical user interfaces that run on less-expensive Intel-based systems.

"The product line needs clarification, and we are confused about upgrades from one machine to another," said Ron Backman, systems engineer at the Naval Weapons Center at China Lake, Calif.

Backman also said that he was concerned about migrating the several thousand Macs at his location from System 6 to System 7 and from AppleTalk Phase 1 to Phase 2. "The business rumblings do bother us," he said. "But we would say there really is a problem if we see a delay in System 7."

Some managers and developers said they have noticed a lack of decisiveness and direction from Apple's evangelists and middle management, indicating that some of Apple's employees are unsure as to the status of both their jobs and their individual projects within the company.

"Something is not adding up right if they can't put the right people in the right places," said a manager who preferred anonymity.

"The stock is doing poorly not because of poor products, but poor management," echoed Kevin Doyle, president of Kevin Doyle Computer Systems in Salem, Mass.

Other managers said they hope that Apple won't lose its innovative and informal character while it goes through its growing pains. "I'm afraid if they allow themselves to go the blue-suit route they will become just another maker of very nice computers," said Bill Cook, technical adviser at Pitney Bowes in Stamford, Conn. "It seems everyone who had made the company extraordinary has gone."

But Jim Young, assistant to the president of Dallas-based EDS Communications Corp. and president of MacIS, the organization of corporate Mac managers, said he remains confident that Apple will rebound. In light of the departure of Loren, who was a major conduit of information between MacIS and Apple, Young said, "I have seen no indication that [MacIS] will get any less support from Apple. The relationship transcends any one individual."

Some managers view Apple's recent cost cutting and reorganization as being orchestrated to soothe worried Wall Street analysts. But in the words of Steve Nussbaum, systems engineer with AT&T Bell Labs in Chicago, "If it takes Wall Street to shake [Apple] into action, that's fine with me." □

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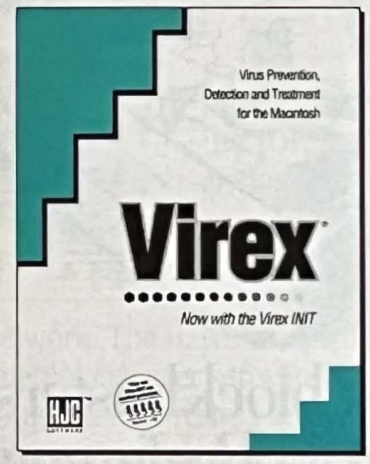

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ImageWriter

From Page 1

and functionality of both printers are almost identical," an Apple service notice stated. Customers will know the new printer as the ImageWriter II; only Apple internal documentation and service technicians will refer to the product as the II/L.

Apple declined to comment.

"The features are the same but the design has changed," said a service technician after inspecting the product description in an Apple technical manual. "It looks the same on the outside, but they've rearranged the guts."

The printer case is slightly modified. The legs, once separate pieces, are now molded into the case. Outlets for the AC power cords and the interface cable have been moved. These cables used to be routed through the printer's legs; now they are positioned at the rear corners of the case. In addition, the power supply has been reduced in size and moved for easier access.

Also, the driver PCB printed circuit board has been eliminated and its functions consolidated onto the main logic board.

In general, technicians said, the new design reflects the trend toward modularity also seen in recent Apple CPUs. One Apple dealer said these adjustments to the ImageWriter II indicate that Apple is looking for a way to cut down on warranty and AppleCare repair expenses. "The ImageWriter II has a history of problems, and these changes make it easier to fix them," he said.

The suggested retail price of the ImageWriter II/L remains unchanged at $595. □

C-Cube

From Page 1

"This is the first image-compression processor that enables desktop computers to effectively handle large images," Rossmann said. "We feel compression is such a fundamental building block that in the future it will be part of every operating system."

Although the year-and-a-half-old company may not be well-known in computer circles, most of its key executives are. Rossmann was co-founder of Radius Inc.; C-Cube President Ed Sun was founder of Weitek Corp.; Jim Rafferty, vice president of software, co-founded Cricket Software Inc.; Alex Balkanski, vice president of products, was co-founder of Diamond Devices Inc., a developer of VLSI architectures for digital signal processing; and Didier Le Gall, director of research, formerly was at Bell Communications Research and is a founding member of a committee working on a motion video compression standard.

The chips are the first processors to implement an international standard for still-image compression proposed by the Joint Photographic Experts Group, a joint committee of the International Standards Organization and the Consultative Committee International Telegraph and Telephone.

C-Cube is a member of the JPEG committee, which has been working on the standard for the past four years, along with IBM Corp., Digital Equipment Corp. and NEC Technologies Inc. Interest in JPEG is high partly because it offers a symmetrical approach to compression, meaning that the same system is used to compress and decompress images.

"C-Cube's chip is crucial in dealing with the problem with compression, namely processing time," said Jonathan Seybold, president of Seybold Publications Inc. of Malibu, Calif. "Where it belongs ultimately is in the desktop computer itself and in output devices. This would enable you to send a compressed file and have it decompressed at the output device without tying up the network."

C-Cube also introduced a Mac software version of its technology. Called the C-Cube Compression Workshop, the $500 package provides software developers with the tools necessary to integrate the CL550's image compression and decompression capabilities into their own software, according to Rafferty.

It includes JPEG software, source code to programming interfaces and sample applications, external commands for HyperCard stacks, plug-in modules for use in other applications, documentation, and a utility that compresses and decompresses digital images.

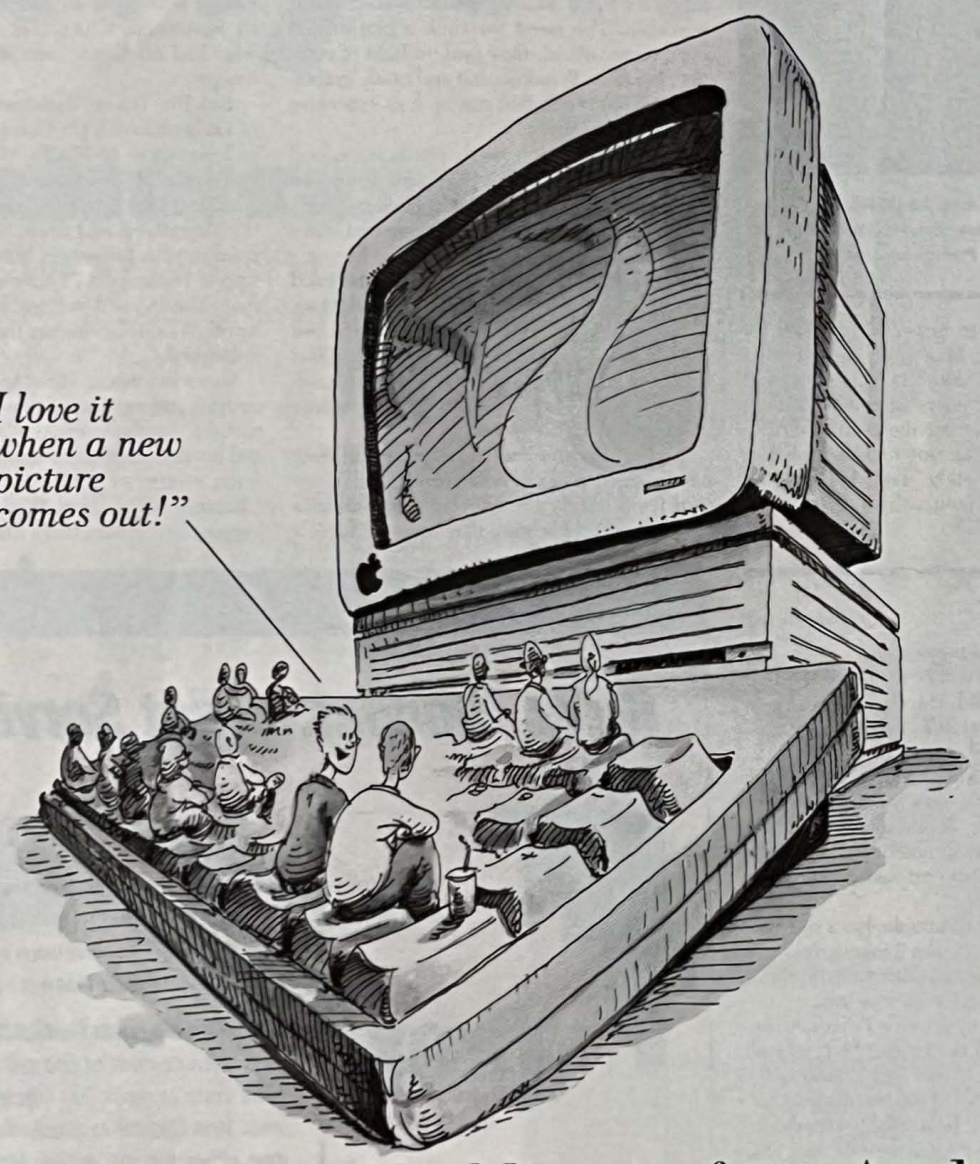
Future versions of the Compression Workshop will be available for IBM PCs running DOS and OS/2, C-Cube said.

Although the software will do everything the CL550s do, there is a performance cost, Rafferty said. The chip works about 3,000 times faster than the software, meaning that a 30-Mbyte image would take about an hour to compress on a 68030-based machine, compared with one second with the chip, he said.

Electronics for Imaging Inc. of San Bruno, Calif., is also offering JPEG-compliant compression software. Called ECOMP, it offers an average ratio of 20-to-1 and takes five to 20 minutes to compress an image (see MacWEEK, Sept. 19, 1989).

According to Rossmann, the CL550-27, due in September, will be available to OEMs in quantities of 10,000 for $155 per chip. In December, the CL550-10 will be available to OEMs in quantities of 10,000 for $95 per chip. Samples of the CL550-27 are due in June and samples of the CL550-10 are scheduled for September. Samples will be $550 each.

C-Cube Microsystems Inc. is located at 399-A W. Trimble Road, San Jose, Calif. 95131; (408) 944-6300. □



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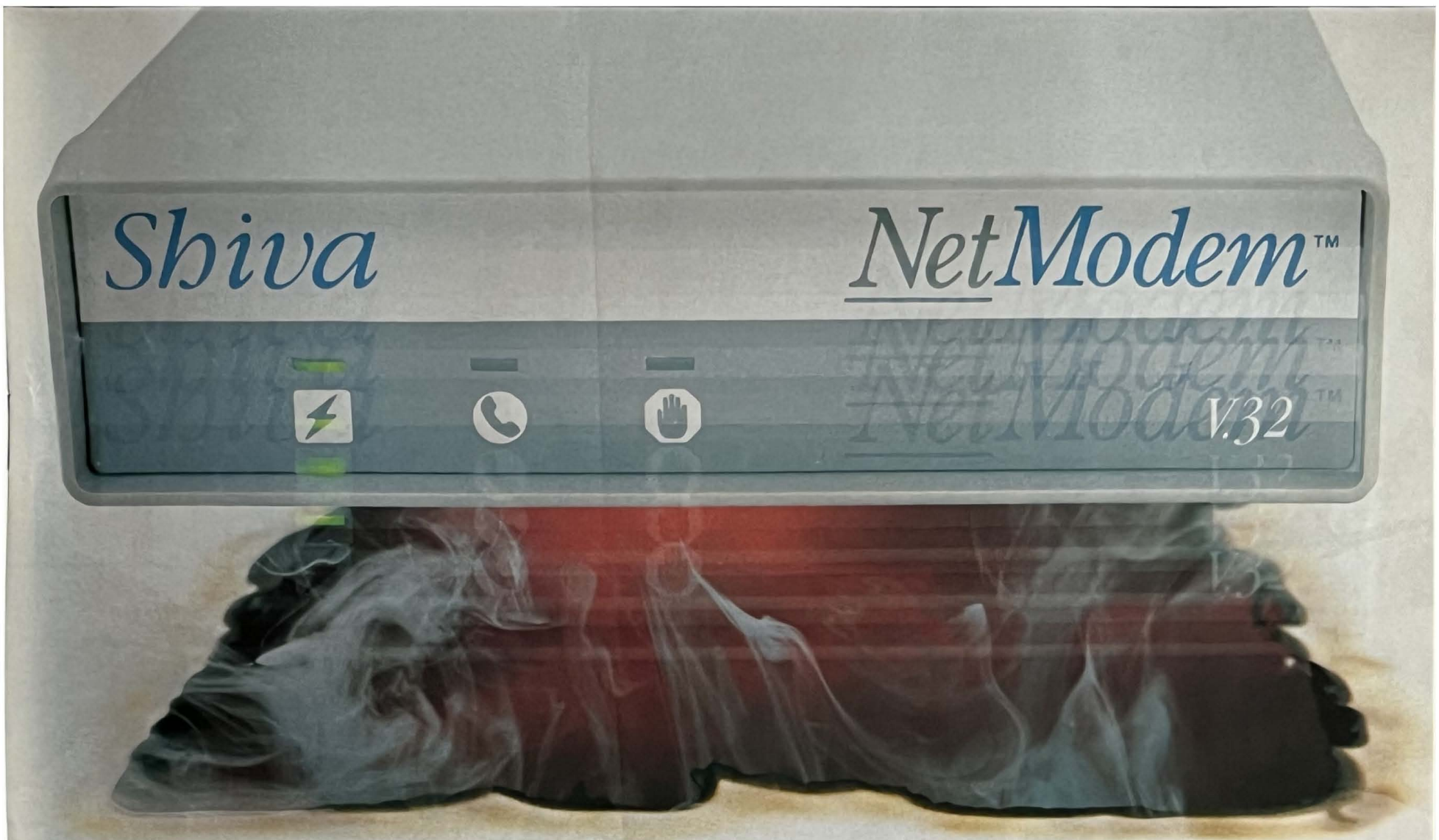

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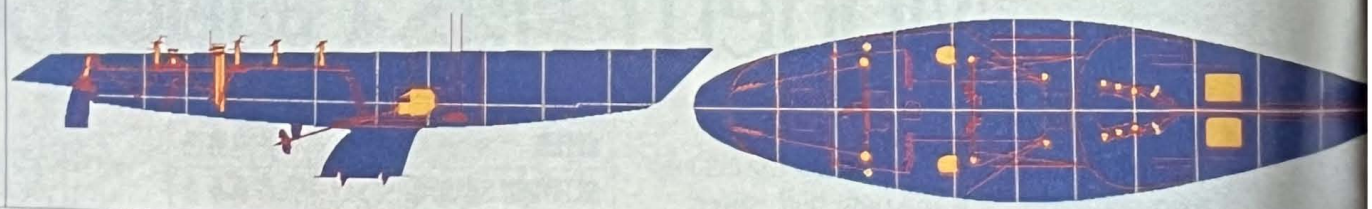

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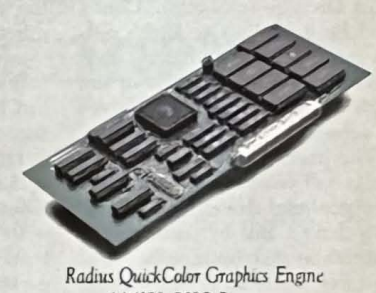

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La Cie adds economy drive series

ZFP models join updated Cirrus line

By Henry Norr

Tigard, Ore. — La Cie Ltd. this month added a new economy-priced ZFP series to its hard drive lineup and at the same time announced new models and new price cuts in its Cirrus series.

The ZFP (for "zero footprint") drives are designed to fit under a classic Mac without taking up additional desk space. Ranging in capacity from a 20-Mbyte unit with an average access time of 25 milliseconds and a price tag of $399 to a 200-Mbyte, $1,159 drive featuring an access time of 16 milliseconds, the new models use mechanisms from both Conner Peripherals Inc. and Quantum Corp. The Conner-based ZFP drives have a one-year warranty, while the Quantums are covered for five years under a manufacturer's warranty.

New models from La Cie

	Capacity in Mbytes	Price
New ZFP series:		
Conner Peripherals mechanisms	20	$399
(one-year warranty)	40	$479
	80	$659
	100	$759
	200	$1,159
Quantum mechanisms	40	$529
(five-year warranty)	80	$759
	105	$859
Cirrus series:		
Conner Peripherals mechanisms	20	$499
(one-year warranty)	40	$529
	80	$759
	100	$859
	200	$1,259
Quantum mechanisms	40	$579
(five-year warranty)	80	$859
	105	$959

La Cie also has added five new Conner-based models to its Cirrus line, in addition to cutting prices on earlier models that use Quantum mechanisms. The Cirrus drives feature a small and distinctive case designed to stand or sit next to the Mac.

All La Cie drives are shipped with the Silverlining utility package (see story below) and 5 Mbytes of public-domain software. Silverserver, a disk-sharing utility previously bundled with the drives, is no longer included.

La Cie Ltd. is at 16285 S.W. 85th St., No. 306, Tigard, Ore. 97224; (503) 684-0143; (800) 999-0143. □

La Cie gives hard disks a Silverlining

Every hard disk has a Silverlining, at least at Macintosh shops like Russ Reynaga's.

Reynaga, senior member of the technical staff at Pitney Bowes Shipping and Weighing Systems Division in Shelton, Conn., said he uses La Cie Ltd.'s Silverlining to format, analyze, optimize and partition all 30 of the high-capacity Macintosh drives he supports.

The program began life three and a half years ago as a bundled formatter and driver for La Cie's own drives. But by adding such features as disk optimization and resizable partitioning to Silverlining and marketing it in a $149 package with Silverserver, a separate program that makes it possible for users to share hard disks across networks or by modem, La Cie has made the utility package into a successful retail offering in its own right.

"It's the fastest and most customizable set of drivers I know of," said Reynaga, "and the partitioning is much more flexible than anything else I've seen."

Reynaga said he discovered Silverlining when he began to look for Mac drivers for Hewlett-Packard Co.'s Coyote drives. The drives, which come in capacities of 300 and 760 Mbytes, were not regularly marketed for the Mac. But Reynaga, who said he has bought more than 5,000 of them for Pitney Bowes and "never experienced a single failure," persuaded HP to make a firmware change that makes it possible to use the Coyote drives with the Macintosh. All he needed then, he said, was software that would deliver the high performance required for his group, which he described as being on the cutting edge of electronic publishing."

Silverlining solved that problem, Reynaga said. Unlike the proprietary drivers bundled with most hard drives, the La Cie program works with virtually any vendor's drives. It lets the user choose the interleave factor and any of six different data transfer techniques — using standard and special "blind" and "handshake" loops — but the software automatically senses the type of Macintosh it is running on and proposes an optimal set of formatting and initialization options. It also provides write locking and password protection of drive volumes; manual parking of drive heads; partitions for A/UX, ProDOS and other operating systems; and a variety of diagnostic tests.

Reynaga said Silverlining's partitioning capabilities were especially valuable. It was the first Macintosh program to support partitioning, according to La Cie, and the current release, Version 5.2, allows partitions to be resized at any time without reformatting. "Our users sometimes make PageMaker files of 75 megs and have no place to put them," Reynaga said. "With Silverlining they just resize a partition to make room."

La Cie's Silverserver disk-sharing utility also has proved "fantastically useful" at his installation, Reynaga said. It is especially popular with Pitney Bowes' executives, he said, because it "gives the VP and his directors access to every machine on the net over the phone from home."

Scott Wirth, a consultant at Seattle-based Intelligent Solutions Inc., said he and his clients use Silverlining exclusively. They, too, take advantage of the capability to resize partitions on the fly. But what really sold Wirth on Silverlining, which he called "about the most powerful hard disk utility around," is that it "mitigates the need to keep many different sets of formatting and diagnostic software on hand" for each vendor he buys drives from, he said.

"I have found no quantum leaps in performance," Wirth said, "but it sure is a much more convenient way to manage several hard drives." — *By Henry Norr*

MICHAEL E. PETERS

Pitney Bowes' Russ Reynaga chose La Cie's Silverlining so he could use HP's high-capacity Coyote drives on his network of 30 8-Mbyte Mac II and IIx workstations.

News BRIEFS

Traveling Software links electronic organizers to Mac

Bothell, Wash. — Traveling Software Inc. last month began shipping PalmtopLink for the Macintosh, a personal information management system tailored to work with the Sharp Wizard OZ-7000 Electronic Organizer, and CasioLink, a similar system for the Casio B.O.S.S. organizer.

Both packages include cables to connect to the hand-held units, as well as software to communicate with the Mac and track phone numbers, appointments and notes. The programs are marketed primarily through Sharp Electronics Corp. and Casio Inc., but Travel Tech, Traveling Software's catalog division, also carries them.

PalmtopLink retails for $149.99, while CasioLink is priced at $109.95.

Sharp Electronics Corp. is located at Sharp Plaza, Mahwah, N.J. 07430-2135; (800) 237-4277. Casio Inc. is located at 570 Mount Pleasant Ave., Dover, N.J. 07801; (201) 361-5400. Traveling Software Inc. is located at 18702 North Creek Parkway, Bothell, Wash. 98011; (206) 483-8088.

Let your mouse do the walking with Macintosh Yellow Pages

Cambridge, Mass. — Promising Macintosh users a way to "let your mouse do the walking," Digital Media Publications Inc. has announced the Macintosh Yellow Pages, a stack-based directory of Mac products and services. Slated for shipment next month, the stack will list more than 2,000 products from more than 800 companies. A custom search engine and on-line help will speed up your shopping, according to DMP. Updates will be released quarterly.

The Macintosh Yellow Pages will cost $39.95 per issue, with subsequent issues available at a reduced price. DMP said it is also working on a CD-ROM version of the product, which will include full-color product demonstrations and additional information.

Digital Media Publications Inc. is located at 362 Memorial Drive, Suite 121, Cambridge, Mass. 02139; (617) 225-7121.

Sams publishes fix-it manual for compact Mac models

Carmel, Ind. — Macmillan Inc.'s Howard W. Sams division last month released Macintosh Repair & Upgrade Secrets, a 351-page book by Larry Pina about diagnosing and repairing hardware problems in the Mac Plus and SE, the Lisa/Mac XL, and older compact Macs. The $32.95 book provides tips and techniques for dealing with a variety of routine and unusual problems, including opening the case and adjusting the monitors, replacing flyback transformers, and installing unofficial upgrades.

Part of the Hayden Macintosh Library series, the book includes a disk with a test-pattern generator to help with monitor repairs. It also includes error codes as well as specifications for components and information on where to find them.

Compatible Systems expands low-cost Ethernet line

Boulder, Colo. — Adding another low-cost Ethernet connectivity product to its line, Compatible Systems Corp. this month released Ether2, a $395 NuBus card for the Macintosh II family. Ether2 supports both thick- and thin-wire Ethernet as well as AppleTalk Phase 1 and 2. It works with Apple's EtherTalk drivers and is fully compatible with all Macintosh network operating systems, according to Compatible Systems. The product is shipped with Manager2 software, which allows users to verify installation, carry out diagnostics and collect data about network operations. Available now, Ether2 is covered by a 30-day money-back guarantee and a one-year warranty. Compatible Systems also manufactures Ether+, a $495 SCSI-to-Ethernet connector.

Compatible Systems Corp. can be reached at P.O. Drawer 17220, Boulder, Colo. 80308; (303) 444-9532; (800) 356-0283.

—Fred Molinari
The Art Director's
Engineer

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For a dealer near you, call today (508) 485-3322.

For an actual PhotoMac color proof, call (800) 221-6071.

PhotoMac is distributed by Ingram Micro D, (714) 540-4781; and by Macamerica, (408) 434-0433.

International Sales Offices: Denmark (45)(2)274511; England (44)(1)200 8282; France (33)(1)46 092750; Germany (49)7142/54025; Israel (972)52-545685; Italy (39)(332)23.63.36; Netherlands (31)(70)99-6360; Sweden (46)(8)98.77.00; Switzerland (41)(56)20.13.55. PhotoMac is a registered trademark of Avalon Development Group. All other trademarks and registered trademarks are the property of their respective holders.

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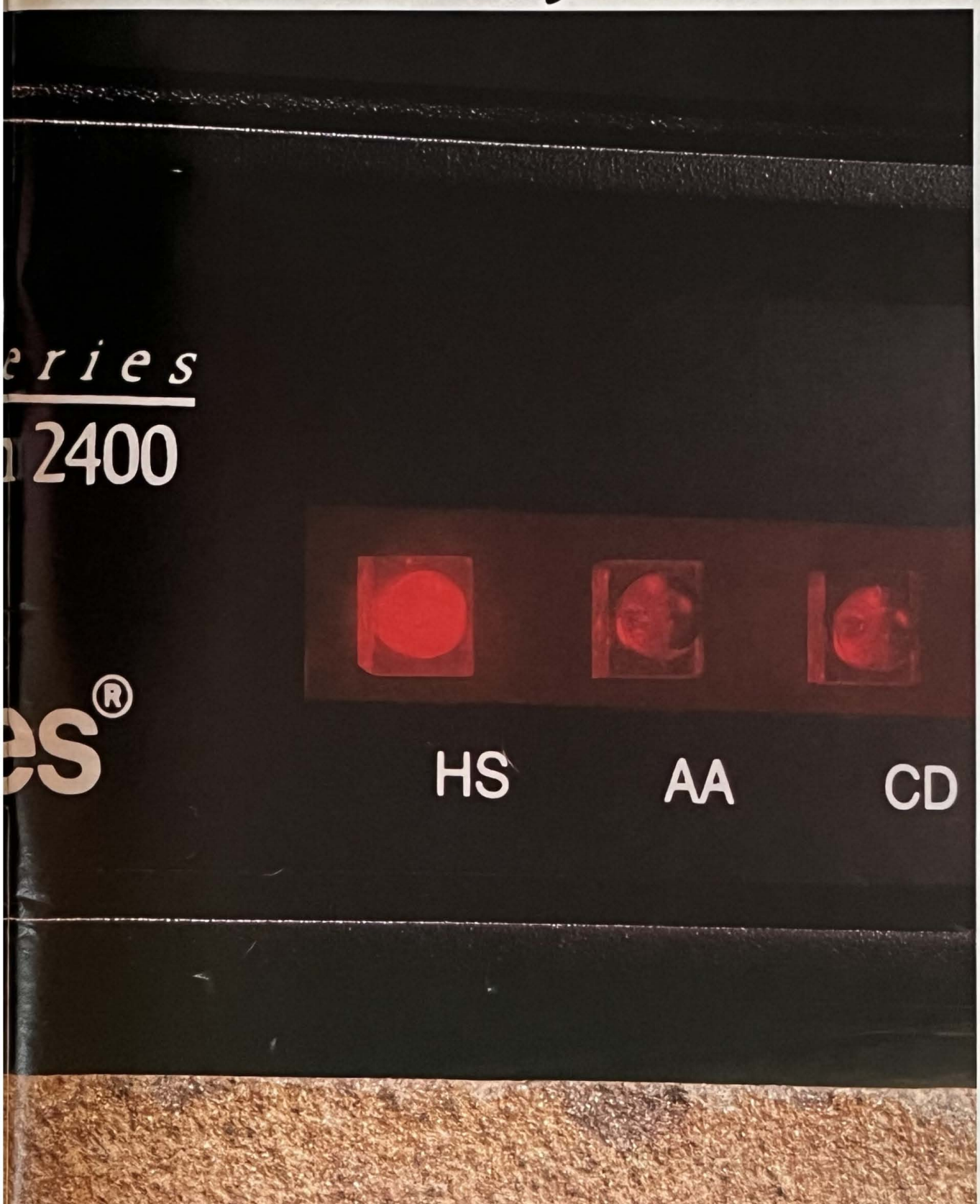

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ParaFont utility customizes fonts

By Pamela Pfiffner

Long Beach, Calif. — Design Science Inc. last month began shipping ParaFont, a new PostScript type-transformation utility. The $99 program lets users customize Type 1 or Type 3 fonts and save the results in Type 3 PostScript format.

While Broderbund Software Inc.'s recently released TypeStyler and Letraset's LetraStudio are designed primarily for display type and save manipulated typefaces as graphic files, ParaFont type effects are more subtle, making them suitable for use as body or display type. Fonts can be expanded and condensed in percentage increments as well as slanted left or right 45 degrees.

Other customization options include fractions, old-style and proportional-width numerals, and width-adjusted small caps. Users can specify stroke thickness for outline style, and line weight and position for the underline style.

ParaFont generates both screen and downloadable PostScript versions of each modified font.

Thomas Hollyer, manager of desktop publishing for Ross Roy Communications, an advertising agency in Bloomfield, Mich., uses ParaFont with Aldus PageMaker to create merchandizing materials for Chrysler Corp. and other clients. "As an in-house desktop group, we have to compete with traditional type houses that can slant and condense type any way they want," he said. "ParaFont lets us do that too."

Using the program does entail some inconveniences, Hollyer said. "If you take an existing Type 1 font and condense or slant it, you have to have the original printer font in your system as well as the ParaFont versions, and you must download them manually," he said.

Design Science Inc. is located at 6475-B E. Pacific Coast Highway, Suite 392, Long Beach, Calif. 90803; (213) 433-0685. □

If you haven't seen LabVIEW® 2, ask someone who has...

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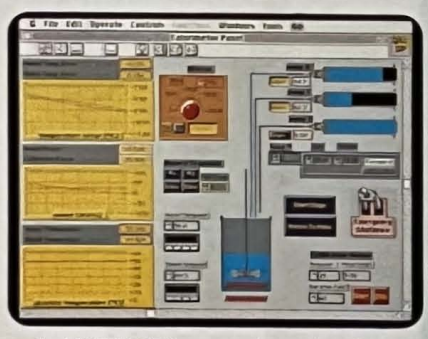
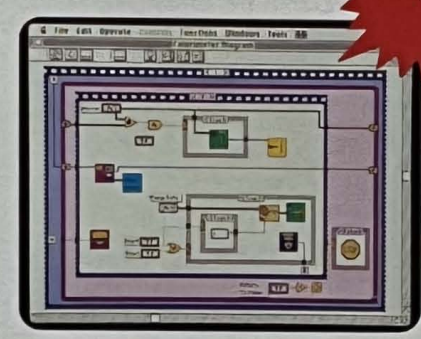


LabVIEW 2 front panel user interface



LabVIEW 2 block diagram program

"Perhaps the new version of National Instruments' LabVIEW will emerge as a de facto standard."
– John M. Fluke, Jr., Chairman, John Fluke Manufacturing Co., Inc.

"LabVIEW 2 is the leader of data acquisition software, probably the most powerful product for data acquisition, analysis, and control on any microcomputer."
– John Rizzo, Technical Editor, MacUser Magazine

"The flexibility of LabVIEW 2 has prompted me to use it as the cornerstone of my future business."
– Steve Conquergood, Chief Design Engineer, CXT Limited

"LabVIEW has been the most valuable computer-based tool I have encountered in the past 10 years. I estimate the LabVIEW programming effort at two man-months, as opposed to the two man-years requested for our advanced workstation."
– Gary W. Johnson, Electronics Engineer, Lawrence Livermore National Laboratory

"Compared to the already excellent release 1.2, LabVIEW 2 is improved in virtually every way. Compared to 'traditional' software, it's almost shocking. Worth the wait? You could say I've been waiting nearly a decade, since personal computers first came out, for something to bring it all together the way LabVIEW does."
– Scott Jordan, Product Line Manager, Newport Corporation

"With LabVIEW's modular system, I can visualize my test systems as a hierarchy of individual, interchangeable components, resulting in shorter development time, increased functionality, and greater execution efficiency."
– Michael Porter, Test Systems Engineer, CODEX Corporation

"I give LabVIEW high marks for its conceptual ease and its ability to adapt. Using LabVIEW, I have developed a sophisticated process control system for our distillation laboratories that is comprehensive yet can be easily configured."
– Glenn Graham, Research and Development Engineer, Union Carbide Corporation

"We did it! LabVIEW 2 is everything we visualized when we set out over six years ago to create the next generation instrumentation software technology. Our free LabVIEW 2 upgrade program is our way of thanking the thousands of pioneering users who helped make this revolution possible."
– James Truchard, Ph.D., President, National Instruments

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Eastgate, MySoftware offer label utilities

By Edwin Garcia

Cambridge, Mass. — Mac users wrestling with the classic problem of printing labels quickly and easily can benefit from two new products on the market.

▶ Eastgate Systems Inc. of Cambridge, Mass., has begun shipping Labels and Envelopes Deluxe II. The $45 desk accessory can print mailing labels, envelopes, postcards, disk labels, Rolodex cards, and other tags and labels in a variety of sizes on all Apple and major third-party printers, the company said.

Users can design custom formats, adding graphics and messages in any font or style. The program retains user preferences and commonly used addresses; mailing lists also can be imported from HyperCard, standard databases and word processors.

Labels and Envelopes Deluxe II is available in a 10-copy pack for $195. Registered owners can upgrade for $15.

▶ MySoftware Co. of Menlo Park, Calif., will release MyAdvancedLabelMaker this week. The $49.95 program, which the company said takes less than five minutes to learn, supports more than 20 standard label sizes as well as custom sizes.

MyAdvancedLabelMaker lets users create or import art for logos and import address lists in text format from databases. It also can read a disk and print a label listing all its files.

Eastgate Systems Inc. can be reached at P.O. Box 1307, Cambridge, Mass. 02238; (617) 924-9044. MySoftware Co. is located at 1259 El Camino Real, Suite 167, Menlo Park, Calif. 94025; (415) 325-9372. □

CD-ROM photo collection can be used like clip art

New York — Discimagery Inc. has released the first volume of The Professional Photography Collection, a $149 CD-ROM offering 100 photographs for use by corporate communications departments and graphic designers.

In a break from standard photo-agency policy, Discimagery grants buyers the right to unlimited usage. Most agencies charge a one-time use fee or allow in-house use only.

The collection also is available on disk, as color prints or as 35mm slides, but at a higher cost. "By offering photographs in a variety of formats with unlimited reproduction rights, we're making these photographs as easy to use as clip art," said Len Kaltman, Discimagery president.

The disc includes a demo version of PhotoMac, the color photo retouching program from Avalon Development Group of Cambridge, Mass., and a coupon to buy the $795 program for only $495.

Discimagery Inc. is located at 18 E. 16th St., New York, N.Y. 10003; (212) 675-8500. □

KMW expands Mac LAN horizons

New gateway links Macs to AS/400s

By John Battelle

Austin, Texas — KMW Systems Corp. last week announced NetAxcess, a software and hardware combination that gives Macintosh LANs access to System/3X and AS/400 midrange minicomputers.

Installing KMW's twinaxial NuBus card and software onto any Mac II turns it into a gateway that can serve IBM minicomputer data to all other Macs on the LAN. A terminal emulation program and HyperCard interface is provided for each client Mac on the network.

AS/400 and System/3X connectivity products offered by IDEAssociates Inc. of Billerica, Mass., and Emerald Technologies Inc. of Bothell, Wash., are single-user products. By lowering the per-Mac cost of midrange connectivity, KMW's gateway solution might alleviate a problem that has slowed the Mac's march into some sectors of corporate computing, according to Gary Kratzer, president of Kratzer Software Engineering, a development and consulting company in El Toro, Calif. "Everybody from the MS-DOS world suffers sticker shock when they start to consider using Macs [for IBM minicomputer connectivity]," he said.

NetAxcess, which will work with LocalTalk, TokenTalk and EtherTalk networks, will ship this week for $3,995, according to the company.

KMW Systems Corp., which late last year became a wholly owned subsidiary of Andrew Corp., is located at 6034 W. Courtyard Drive, Austin, Texas 78730; (512) 338-3000. □

DiskDoubler squeezes files by 50%

By Henry Norr

Palo Alto, Calif. — DiskDoubler, a new utility, will soon let users compress any file by 50 percent or more directly from the Mac desktop.

The $59.95 package, which includes both an application and a Startup document (INIT) that adds a new menu to the Finder, will compress files an average of 50 percent, according to its publisher, Salient. But John Dryden, president of Linotext, a Cupertino, Calif.-based service bureau, said he regularly gets 93 percent to 97 percent compression of scanned color TIFF images.

Dryden said the program is more efficient and much faster than Raymond Lau's StuffIt 1.5.1 shareware compression utility, although it lacks StuffIt's ability to compress multiple files from various folders into a single archive.

"In a production environment it's going to be a must," said Dryden, who has been using the program for two weeks. "Aside from speed, its great advantage is that it's available at the touch of a button, without opening a special application. It makes it easy to reclaim your disk space as soon as you finish a job."

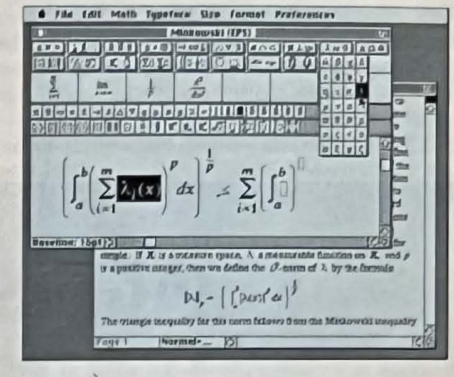
Salient also markets Partner, an INIT that lets users set up direct links between graphics programs and word processing or publishing applications.

Salient is located at 3101 Avalon Court, Palo Alto, Calif. 94306; (415) 852-9567. □

MathType TEX translator brings WYSIWYG to technical typesetting

By Elinor Craig

Long Beach, Calif.— Design Science Inc. last week released MathType 2.10, an update that lets the WYSIWYG equation editor generate and read files in the TEX typesetting language.



MathType 2.10, a WYSIWYG equation editor, adds a translator that can generate and read TEX files.

The $149 desk accessory and application lets users build up equations by pointing and clicking on symbol palettes.

The new two-way interface to TEX lets users construct a formula in MathType, then generate the corresponding TEX code or import equations from TEX for editing.

"When you are writing in TEX, you don't see the actual equation; you see the code," said Marvin Simon, a senior research engineer at the Jet Propulsion Laboratory in Pasadena, Calif., who is using the product to typeset a manuscript. "To change anything, you have to change the code. MathType lets me insert whatever I want, when I want, and the screen shows exactly what I will print out."

By summer, the company said, it will offer an optional MathType translator for Wolfram Research Corp.'s Mathematica.

Upgrades are free to customers who bought MathType after Nov. 1, 1989, and $35 for earlier buyers.

Design Science Inc. is located at 6475-B E. Pacific Coast Highway, Suite 392, Long Beach, Calif. 90803; (213) 433-0685. □

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ImageCatcher nabs Dialog graphics

By Nathalie Welch

Palo Alto, Calif. — Dialog Information Services Inc. has released ImageCatcher, a desk accessory that for the first time allows Macintosh users searching the Dialog information service to display, print and save retrieved images.

Because ImageCatcher supports TIFF, PICT and MacPaint formats, users can transfer images from the two Dialog databases that support graphics — Trademarkscan-Federal, a library of trademark information, and Heilbron, a database of chemical properties — to standard Mac graphics, word processing and page-layout applications. Once transferred, these images can be used to enhance legal reports, research papers or teaching materials, according to the company.

ImageCatcher, priced at $49, is Dialog's first software package for the Macintosh. Prior to its release, Mac users searching the service could obtain retrieved images only by ordering a hard-copy print, whereas searchers using IBM PCs and compatibles have had the capability to download images since the January 1988 release of a program called Dialoglink.

"Prior to ImageCatcher, to get images of recent trademarks, we had to rely on paper copies we had in-house. For copies of older trademark images, we had to find them in libraries or telephone Washington and have them send us a copy," said Daniel Kegan of Kegan & Kegan Ltd., a trademark and computer law firm in Chicago. "Using ImageCatcher saves us time and money and allows us to serve our clients better."

ImageCatcher can be used with most Macintosh telecommunications software, the company said.

Dialog Information Services Inc. is located at 3460 Hillview Ave., Palo Alto, Calif. 94304; (415) 858-3785; (800) 334-2564. □

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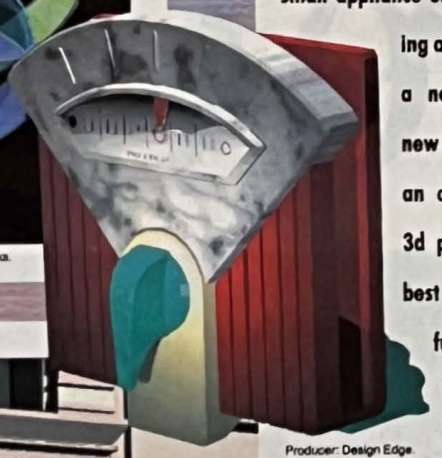

Producer: Design Edge. Creative Director: Chipp Walters. Designer: Mark Kimbrough.

Producer: KCA Architects. Designer: Colin Cathcart. Client: Chess King.

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Stanford's S.T.A.T. tool aimed at sales reps

By Henry Norr

Los Angeles — Stanford Business Systems Inc. last month began shipping S.T.A.T., an application targeted at sales and marketing professionals and their managers.

S.T.A.T., which stands for Sales Tracking and Analysis Tool, not only maintains information about leads and tracks contacts, but also offers a variety of specialized statistical reports and graphs, including:

- Goals, quotas and percentage met, expenses, close ratios and other performance indicators for each sales representative covered by the system.
- Sales projections by any date increment.
- Lead source and status reports.

The program, which is built in Version 2.0 of 4th Dimension from ACIUS Inc. of Cupertino, Calif., can track an unlimited number of clients or leads, subject only to disk space limits.

"On a scale of one to 10, I'd give it an 11," said Keith Jentoft, vice president of Lexohm Inc., a Minneapolis-based manufacturer of thermal-printer mechanisms, who said he began using prerelease versions last May. "It's increased the effectiveness of our sales team by orders of magnitude."

Jentoft said he had looked at many other sales-tracking applications and found S.T.A.T. the fastest and easiest to use and unique in its management capabilities, although he noted that 4D's reporting functions remain slow.

Each S.T.A.T lead record includes basic personal data, sales-specific fields such as lead source and close date, 10 user-definable fields, and 10 pages for comments. A history of all calls and contacts for each lead entry can be reviewed at any time, and leads can be located by the contents of any field, including comment fields.

S.T.A.T. also offers automatic scheduling of calls by follow-up dates and project due dates, a tickler file with automatic rollover of old calls, a month-at-a-glance calendar, a customizable mail-merge facility, and an integrated graphics module that can generate six types of charts.

The single-user version of S.T.A.T. includes one 4th Dimension Runtime and sells for $795. It is available for $895 with dbWrite, a word processing add-on from Metropolis Software Inc. of Palo Alto, Calif.

A multi-user package, priced at $1,495, comes with two Runtime copies of 4D but supports up to five users; customers with larger networks should contact the company. The multi-user version runs on AppleShare or any other file server compatible with AFP (AppleTalk Filing Protocol).

A demo disk is available for $35.

Stanford Business Systems Inc. is located at 5250 W. Century Blvd., Suite 407, Los Angeles, Calif. 90045; (213) 417-4940. □

StructSoft stresses CASE teamwork

TurboCASE aims at analysis phase

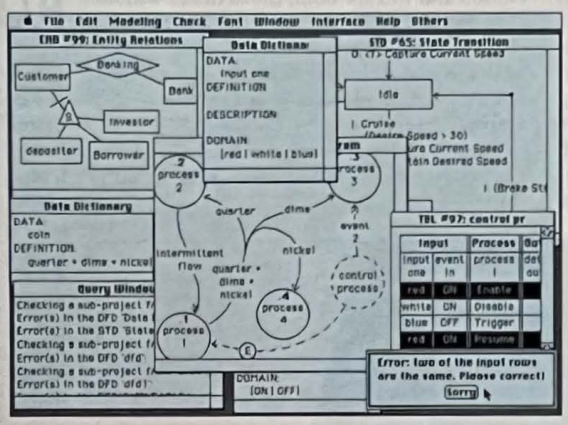
By Carolyn Said

Bellevue, Wash. — Bringing Macintosh ease of use to computer-aided software engineering, StructSoft Inc. recently released a new CASE tool for the analysis stage of software development.

"TurboCASE is the most usable CASE tool on the market. You can use it right away and be productive right away," said Bruce MacIsaac, a software engineer at MacDonald Dettwiler, a satellite imagery company in Richmond, British Columbia. Difficulty in learning new products has been a major stumbling block for CASE tools his company has used in the past, MacIsaac added.

Designed to support teamwork, TurboCASE allows partitioning of large projects, offers a merge function to integrate pieces into a single project, and has import and export capabilities that allow sharing of project data.

However, MacIsaac said, since the program is not server-based, it is not suitable for very large project teams.



TurboCASE, a computer-aided software engineering tool, lets users model a project from different points of view in multiple windows. A built-in syntax and consistency checker (lower right corner) flags errors as they are entered.

According to the company, other features of the $995 program include:

▶ Comprehensive real-time and structured modeling with support for various standard methodologies.

▶ Ability to model a project from different points of view in up to 10 windows.

▶ An integrated data dictionary that is automatically updated as information is added to diagrams.

▶ Complete data-flow analysis, including the capability to split, merge and prune subflows.

▶ Built-in consistency checking that detects errors while the user works rather than after all information has been entered.

▶ A simple interface with easy, hypertextlike navigation and context-sensitive pop-up menus.

▶ Links to Aldus PageMaker and Interleaf Publisher for preparing documentation.

An update that adds data modeling support will be available in mid-March free to existing users, according to Shang-cheng Chyou, StructSoft president.

TurboCASE supports a spectrum of diagram styles and types, including data-flow diagrams, entity-relationship diagrams, structure charts, state-transition diagrams, minispecifications, flow charts and organizational diagrams, according to the company.

"For the price, it's quite remarkably cost-effective," MacIsaac said.

StructSoft Inc. is located at 5416 156th Ave. S.E., Bellevue, Wash. 98006; (206) 644-9834. □

MPO DA automates access to Connect service

Denton, Texas — Computer Dynamics Inc. last week shipped a $59.95 desk accessory that simplifies access to Connect, the on-line information service run by Connect Inc. of Cupertino, Calif.

MPO (Macintosh Post Office), formerly code-named MITA, lets Connect users log on at up to three predetermined times a day, download incoming mail and send mail from their "out basket" (see MacWEEK, Nov. 21, 1989). AppleLink support will be added later, the company said.

Computer Dynamics Inc. is at 2220 San Jacinto, Suite 325, Denton, Texas 76205; (817) 566-5515. □

Word gains kit for foreign languages

By Edwin García

Redmond, Wash. — Microsoft Corp. last month began shipping a kit that includes British English, Dutch, French, German, Italian, Spanish and Swedish spelling dictionaries for Microsoft Word 4.0. The company also released legal and medical dictionaries for the Mac word processing program.

The foreign-language kit, priced at $75 plus $5.50 for shipping, is a three-disk set that includes all the dictionaries. Users can access the foreign word lists as they would the standard Word dictionary, but only one of the non-English dictionaries can be active at a time and none can be used while the standard U.S. English dictionary is active.

The legal and medical dictionaries, priced at $49.95 each plus $5.50 for shipping, can be integrated into the standard Word dictionary.

The dictionaries can be ordered by calling Editor's Choice Software, a Seattle-based catalog marketing company, at (800) 641-1116.

Microsoft Corp. is located at 16011 N.E. 36th Way, Redmond, Wash., 98073; (206) 882-8080. □

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Quarterly puts multimedia to work

By Connie Guglielmo

Schenectady, N.Y. — Putting the technology it describes to use, The Multimedia Review newsletter, which covers desktop video and multimedia technology for the Macintosh, will be distributed as a multimedia presentation in the form of a HyperCard stack.

A hard-copy version of the new quarterly review also will be available from its publisher, the MUG News Service.

The first edition, released last month, contains articles describing ways of combining text, graphics, sound and video using Macintosh-based technology. "No one is quite sure what multimedia — Macintosh style — is yet, and we hope to help fine-tune it in the coming months," said Don Rittner, founder and publisher of the MUG News Service.

Yearly subscription fees are $50 for the hard-copy edition, $35 for the HyperCard edition and $75 for both. Subscribers will be able to download the Multimedia Review stack from the software libraries found in the MUG News Service folder on America Online, a new electronic information and messaging service.

The MUG News Service is located at 1726 Lenox Road, Schenectady, N.Y. 12308; (518) 374-1088. □

AppMaker supports A/UX, Apple IIGS

By John Battelle

Concord, Mass. — Bowers Development Corp. has been busy creating tools that make it easier for developers to give their programs a Macintosh interface, regardless of the Apple platform for which they are destined.

Bowers late last year introduced a version of its AppMaker interface programming utility for A/UX, Apple's Unix operating system, and last month it added a version for the Apple IIGS.

AppMaker, which originally shipped in April 1989, provides a palette of tools developers can use to draw menus, windows, dialogs and other screen elements; the program then automatically generates the code for those features.

The A/UX version of AppMaker gives Unix developers a quick way to put a Mac interface on their Unix applications and market them for A/UX, according to Spec Bowers, president of Bowers Development.

The version for Apple IIGS uses the Mac as a development platform for Apple IIGS applications under Apple's Macintosh Programmer's Workshop (MPW) IIGS cross-development system. It can be used with AppMaker for the Macintosh to develop the same application for both platforms.

No licensing fees are required for products created with AppMaker, Bowers said, and it comes with free technical support. Both AppMaker for A/UX and for the IIGS are available for $295. Registered owners of AppMaker for the Macintosh can purchase the IIGS version for $100.

Bowers Development Corp. can be reached at P.O. Box 9, Lincoln Center, Mass. 01773; (508) 369-8175. □

Simply Accounting updated, renamed

By Edwin Garcia

Garden City, N.Y. — Computer Associates International Inc. is now shipping Simply Accounting Version 1.1, an update that gives the small-business accounting package a new name and a range of new features.

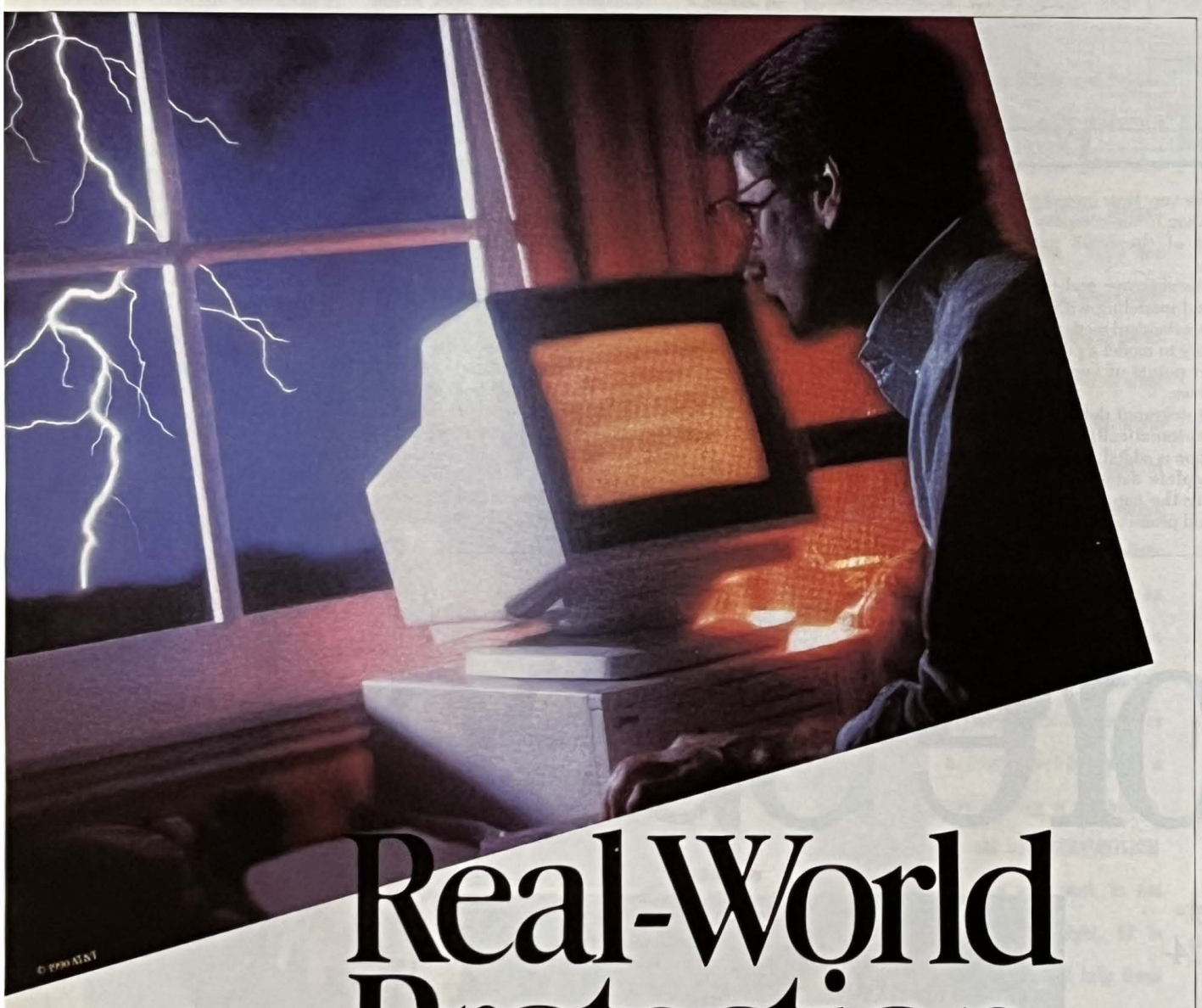
Computer Associates now calls the $349 program ACCPAC Bedford Simply Accounting, to match its ACCPAC (accounting package) offerings for MS-DOS. The new version, Version 1.1, overcomes the original release's incompatibility with the Mac IIci. Enhancements include multilevel password protection, a streamlined accounts receivable function that can incorporate late charges directly into customer statements, an optional warning when users are about to post unprinted invoices and checks, and printing of mailing labels in any size and format.

Bob Salvin, president of Salvin Dental Supplies in Charlotte, N.C., and a beta tester of the program, said the new password security function has proved beneficial in keeping certain files confidential.

"We allow access to all of our graphics files, but we didn't want everyone to get into our financials," Salvin said.

Upgrades are $50 for registered owners and free to customers who purchased Computer Associates' SupportPlus maintenance plan.

Computer Associates International Inc. is located at 1240 McKay Drive, San Jose, Calif. 95131; (408) 432-1727; (800) 531-5236. □



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AT&T Network Systems

Aperture links drawing to data

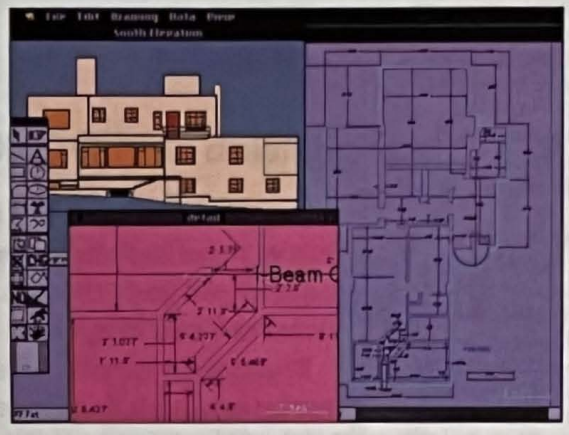
By Connie Guglielmo

Stamford, Conn. — Aperture Technologies Inc. is shipping Aperture, its "visual information manager" for engineering design, documentation and presentation.

The $795 program combines a high-precision drawing environment with a database manager and report writer. Users can create drawings, attach data to the objects in the drawings, link drawings together and display data on the drawings.

"I've used it to create scaled drawings of all our buildings, with a layout of all the offices, the computer networks, and electrical and plumbing information," said Cindy Sheperd, a facilities administrator for United Technologies Corp. of Cambridge, Mass. "People used to use MacDraw II to create the drawings, but with [Aperture] we can provide layers of information."

The drawing system supports up to 256 layers that can be turned on and off independently of each other. Layers can also be "grayed" so that they fade into the background. Aperture uses "mouse-up" drawing, letting users click the mouse for each point being defined in an object rather than drawing by clicking and dragging. Between clicks, users can zoom or scroll through large drawings.



Aperture, which combines high-precision drawing tools with flat-file database capabilities, lets architects, engineers and facilities managers develop "visual information systems" linking plans or schematics to detailed data.

Other features include the ability to define any object in a drawing as a Link Button. When the button is clicked, the program automatically opens another drawing that contains a specified view of that drawing. An unlimited number of Link Buttons may be created.

Aperture also lets users create symbol libraries: Any object in the drawing can be made into a symbol, with additional information such as dimension lines and notes attached.

For each project, users also can create a database with records that each have numerous fields of information. For instance, office equipment may be listed with a corresponding model number, price information and manufacturer's name.

Aperture will run on any Macintosh with 1 Mbyte of RAM and a hard disk.

Aperture Technologies Inc. is located at 84 West Park Place, Stamford, Conn. 06901; (203) 975-7587. □

Image Grabber DA provides timer for delayed-action screen capture

By Henry Norr

Bellevue, Wash. — Sabastian Software is hoping that its Image Grabber 2.0 will grab it a share of the increasingly competitive market for screen-dump utilities.

The $49 desk accessory can capture partial-, full- or multiple-screen images, complete with cursor, in black and white or color, including 32-bit color. Once the image is captured, Image Grabber presents a dialog box that lets the user direct the image to the Clipboard, to a printer, or to disk as a PICT or MacPaint file or as a PICT resource that can be installed within another file. Files saved to disk can be named and placed in any available folder.

Screens can be captured with dialog boxes open or menus down — a function not available with the limited screen-dump facility built into Apple's System software — because Image Grabber 2.0 provides a time-delay option. The user specifies the length (in seconds) of the delay that occurs before the image is captured, then closes the DA and sets up the desired screen.

Competing third-party screen-dump utilities from Mainstay of Agoura Hills, Calif.; Preferred Publishers Inc. of Memphis, Tenn.; Trillium Software of Lombard, Ill.; and Boston Companies Inc. of Sudbury, Mass., provide comparable capabilities through Startup documents (INITs) or Fkeys. Sabastian said it chose its strictly DA approach to minimize the risk of incompatibility.

Martin Fisk, a bioanalytical chemist at Thomas Research Corp. of Hayward, Calif., said he uses Image Grabber 2.0 to copy individual boxes from flow charts developed with Claris Corp.'s MacProject II for pasting into reports he produces in his word processor.

"I tried other programs," he said, "and some of them have more features, but as a non-programmer I found Image Grabber more convenient." He said the capability to direct the image anywhere he wants is an especially valuable feature.

The new release, Version 2.0, has been sent free to registered owners of the original release.

Sabastian Software can be reached at P.O. Box 70278, Bellevue, Wash. 98007; (206) 861-0602. □

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Letters

Biggest Mac CAD hurdle is reputation as a 'toy'

GORDON STUDER

As a software manager developing a high-end engineering system for the Mac, I am concerned by statements made by Dave Kulbarsh, marketing manager for Apple's Design and Drafting Group in the Dec. 12, 1989, article, "Mac CAD: Overcoming a bad image." In defining Apple's marketing position, Kulbarsh said: "We're going after the 60 percent of technical users who use computers for design. Engineers don't do CAD; CAD is drafting. They want to do sketching and drawing, not dimensioning."

I agree with the article's criticism of the Mac's speed as a hurdle that must be overcome; however, a far taller hurdle is the Mac's reputation as a "toy" in the CAD arena. Apple has made great strides in the past year by luring several big-name CAD developers onto the Mac platform, but statements like Kulbarsh's destroy all efforts and progress made this past year.

Most engineers do need the capability to perform drafting functions, and those that don't certainly require the capability to have their "sketches" efficiently dimensioned by detailers. Kulbarsh must rethink his position if Apple is ever to shed its reputation as a builder of "toys."

Richard L. Pool
Walled Lake, Mich.

You can wait for 7.0, or have its promise now

In his Mac Soapbox of Jan. 9, Yogen Dalal of Claris lobs one more salvo in the barrage of System 7.0 prophecies. We have been bombarded for months with visions of System 7.0. The fact is, much of System 7.0's value will be a long time in coming, and much of what it promises is already available.

Virtual from Connectix, for example, provides virtual memory right now. I have been using it on my 4-Mbyte IIcx without a single problem. Outline fonts sound nice, but I can use ATM right now. It makes my screen and ImageWriter output look great.

The loudest noise has been made about Interapplication Communications. Dalal states that with IAC, "we embark on a new era — an era of possibility." In reality, it will be a long time before developers get together to rewrite their applications for IAC, but users can get similar results now with Partner from Salient.

Partner lets many publishing and graphics applications communicate. This is accomplished without modifying applications code, so users don't have to wait for developers to rewrite their applications.

Users now have two options: Wait and see if the promises of System 7.0 pan out or pay a few dollars to get real results today.

Terry Morse, co-founder
Salient
Palo Alto, Calif.

Don't forget PhotoMac when writing DTP history

Your Jan. 16 Graphic Arts Report was supposed to be about the development of desktop publishing during the past five years, but Avalon's PhotoMac, which was the only color image-manipulation product on the market for almost a year, was overlooked. PhotoMac was the first with virtual memory, progress tracking with the ability to cancel, opening of multiple images, adaptive eight-bit display of 24-bit data, decent color separation and electronic stripping.

I can't believe the article "DTP: 5 years old and still going strong" jumped from Letraset's ImageStudio to Adobe Photoshop, which isn't even available yet.

Wan Chi Lau, software engineer
Avalon Development Group
Cambridge, Mass.

Hooked on the Macintosh but ready to switch

Your article on "Apple earnings skid, sales lag" (MacWEEK, Jan. 23) is long overdue. Apple hasn't deserved customer loyalty for some time, and now it's experiencing customer disdain.

I purchased a Mac 128K from a Chicago dealer in 1984. I did so not realizing everything connected with the magical name Macintosh was twice the price of comparable products from the contemptible IBM clan.

But since getting hooked on the Mac, I have become progressively more annoyed at the Imperial Apple Attitude. The computers cost too much, the warranty is lousy, and servicing is nearly impossible outside of a town of 25,000 or more, now that Apple has shut off independent dealers who had the temerity to offer competitive products because of Apple's pricing and unwillingness to stand behind its products.

At this stage, if Windows or some other knockoff is ever developed to satisfactorily duplicate the Mac's ease of use, I will happily junk my Mac and do business with someone more responsive to my needs.

Bruce Ferguson
Lakeview, Ark.

He didn't expect miracles, just readable type

I did not get ATM so I can sit back and admire the appearance of 39-point Korinna Kursiv on the screen, as touted in Letters (MacWEEK, Jan. 12). I know how outline fonts can generate smooth, large-size characters. I also realize the limitation of rendering 12-point type at 72 dpi.

What I did expect is to be able to use a serif font, such as Times Roman, in a document, with 12-point type for the main body and larger sizes for headings, and print it out on an ImageWriter II. The Adobe ads clearly showed that combination (Mac Plus, Word 4.0 document on the screen, ImageWriter for output).

Did I get what I expected?

No. The characters may be beautiful, but the document is not. It's sometimes even difficult to read. In MacWrite II the spacing becomes acceptable at sizes of 32 points and above; in Word 4.0 it is just as bad in any size.

ATM may be an excellent product for many uses, but for routine word processing for ImageWriter output I find it worse than useless.

Jacob Shekel
Brookline, Mass.

Northwestern alum sees red over purple on white

I would like to complain in the strongest possible terms [about] Ezra Shapiro's characterization of purple on white as "ghastly" (MacWEEK, Dec. 12, 1989).

GORDON STUDER

As a loyal alumnus of Northwestern University in Evanston, Ill., when cut, I bleed the school's colors — purple and white. I'm sure referring to these colors as ghastly would make the football team mad enough to actually win a game.

If Shapiro does not make a formal apology, I will be forced to continue reading his column in MacWEEK as if nothing had happened.

Chris Vargas, systems manager
Miller Mauro Group Inc.
Wilmington, Del.

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. MCI: 323-1203; fax: (415) 243-3650. We reserve the right to edit letters for clarity and length.

Editorial

Storms toss the good ship Macintosh

How could Apple have fallen so far so fast? As recently as the beginning of December, the good ship Macintosh appeared on course and sailing under strong wind. By last week, though, it looked like a ship of fools, just short of foundering and with deck hands openly talking of mutiny.

The winds seem to have shifted suddenly, but that is more a matter of appearances than reality. In truth, the sailing was not so smooth as it seemed back in December. Nor are the straits so dire as they might appear today.

The turmoil during the past few weeks has been magnified by the intense press attention and public interest that Apple inspires. A management shuffle at most larger corporations would generate far less scrutiny.

The earlier false appearance of smooth sailing is more troubling. How could Apple deal with emerging problems if it refused to acknowledge them? In fact, all of the many problems for which Apple has recently come under criticism were evident to informed observers long before the recent crisis.

Certainly, regular readers of MacWEEK knew that Apple was missing a significant market opportunity by not offering a low-end Macintosh. They knew that Apple's recent marketing and promotional campaigns have been ineffective. They knew that Apple had a serious problem in providing critical service and support for its customers. And they knew that the overall American economy, and especially the computer industry, was slowing down after years of record growth.

Informed observers knew this, but Apple didn't own up to any of it. For months in press conferences, analysts meetings and other public appearances, CEO John Sculley and other Apple officials brushed aside criticisms and concerns. As the problems mounted, the public message continued to be "no problem."

Eventually the truth had to come out, as it did when the company was forced in December to lower its revenue and earning projections and again when it reported those figures last month. The reaction to such mildly negative news wouldn't have been so dramatic if Apple had been more truthful all along. □

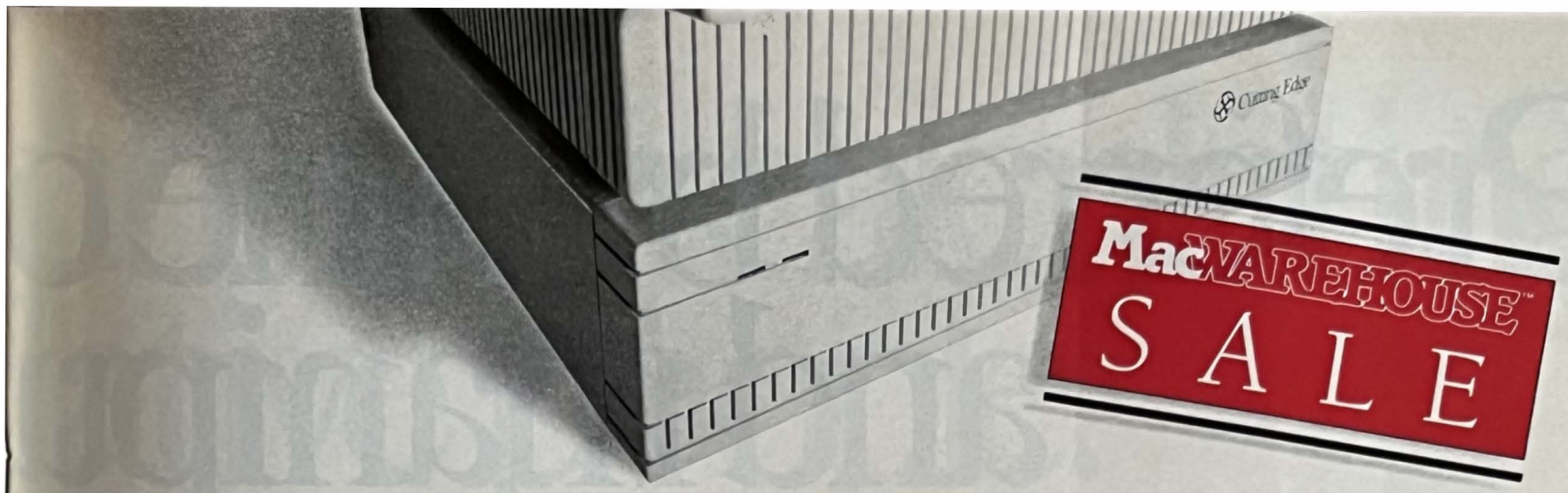
How Apple could become shipshape again

It may come a few months late (see editorial above), but a dose of truth-telling by Apple executives will go a long way toward putting the current crisis behind them. Beyond that, the company has to stop focusing on board-room politics and start paying attention to the basics of its business.

That means remedying the following shortcomings:

- Apple still has a 90-day warranty and inadequate means to provide support and service to corporate customers.
- It has failed to produce a $2,000 to $4,000 modular color Macintosh that can compete on price and performance with 80386SX machines.
- It has not yet updated its aging Macintosh SE and Plus compact models.
- It has not implemented a plan to replace the moribund Apple II with a true low-cost Mac and Apple II transition strategy.
- Worst of all, Apple has been unable to create consistent, high-impact marketing that gives customers incentive to purchase Macs over competing computers.

That is a formidable list, but none of Apple's failings are insurmountable. The fundamentals of its business are still strong. Customers will continue to buy Macintoshes in ever larger numbers if Apple responds to their needs and reacts to the changing competitive marketplace. □



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CMS, MacStack	459	$70	499	$46	599	$26	649	$50	769	$30	839	$36
Dolphin, Integra	429	$70	479	$116	549	$170	615	$163	695	$300	829	$310
PLI, Infinity Turbo	—	—	569	$20	619	**$26	—	—	—	—	1098	$21
*Quantum Internal	—	—	—	—	499	$26	—	—	829	$40	—	—

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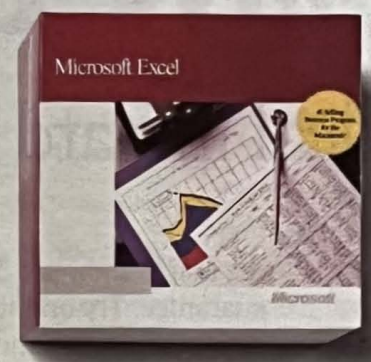

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		JUL	AUG	SEP	OCT	NOV	DEC
Revenue *(In Thousands)*	Actual	$8,400	$12,300	$13,900	$8,700	$13,000	$21,300
	Forecast	$6,453	$8,800	$10,050	$9,460	$12,000	$18,900
	Variance	$1,947	$3,500	$3,850	($760)	$1,000	$2,400
	%	130%	140%	138%	92%	108%	113%
Cost of Goods Sold	Actual	$1,848	$3,198	$3,475	$2,262	$2,860	$7,663
	Forecast	$1,549	$2,288	$2,312	$1,608	$2,640	$3,969
	Variance	$299	$910	$1,164	$654	$220	($3,969)
	%	119%	140%	150%	141%	108%	0%
	Gross Profit	**$6,552**	**$9,102**	**$10,425**	**$6,438**	**$10,140**	**$21,300**

WxC 1000

		JUL	AUG	SEP	OCT	NOV	DEC
Revenue *(In Thousands)*	Actual	$2,184	$3,198	$3,892	$2,610	$4,030	$5,325
	Forecast	$1,613	$2,200	$2,513	$2,365	$3,000	$4,725

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MEMO:

TO: *Shannon Pitts*

FR: *Peter Cohen*

DT: *November 13th, 1989*

RE: *Presentation to the Board*

In preparation for the annual meeting, I've created a 20-minute slide presentation on our successful entry into the small printer market.

The presentation will explain to the shareholders that, on a basis of sound marketing strategy, reinforced with our knowledge of the printer business at other levels, we have been able to grow from a 2 percent share of market, to 9 percent in 18 short months.

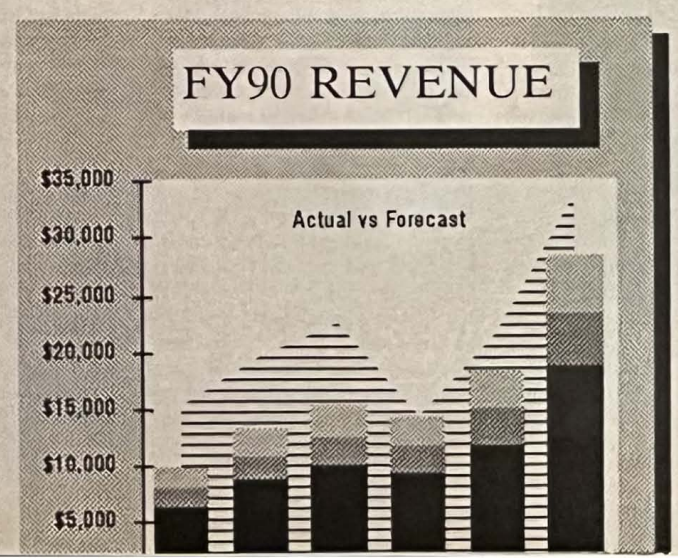
To the right is an excerpt of the presentation which illustrates our growth. Anticipated concerns will probably center around quality of service and the ability to meet market demand over the next year.

We should be able to squelch any fears by

WxC 2000

	JUL	AUG	SEP
Revenue *(In Thousands)*			
Actual	$8,400	$12,300	$13,900
Forecast	$6,453	$8,800	$10,050
Variance	$1,947	$3,500	$3,850
%	130%	140%	138%

With a very respectable 9 percent share after only 18 months, we feel we can reach 15 percent by the end of the next fiscal year (see six month projection).



LARRY FLEMING

To shift the balance from PCs to Macs, Wayne Hardy counts on the preference of new users.

PCs to Macs: A strategy

Given the choice, new users pick Macs

By Craig Zarley

It's a common story: A grass-roots user rebellion forces a reluctant information systems department to adopt a dual PC-Mac standard.

But the IS group at Frontier Engineering Inc. of Stillwater, Okla., has come up with a different scenario. In the past two years, Frontier's IS manager, Wayne Hardy, has planned and executed a strategy to circumvent the company's PC standard by encouraging computer novices and new employees to use Macs, a task made formidable by an engineering user community with a strong bias toward IBM PCs and compatibles. That Hardy has succeeded in shifting the strategic direction of corporate computing from the PC to the Mac can be traced to a policy of coexistence rather than confrontation.

"The IS group didn't push the Macs because we understood that the worst thing you could do is argue with a PC user," Hardy said. "Instead we brought the Mac in, letting new users decide which machine they wanted."

The need for a change became evident soon after Hardy joined the company in March 1988. Frontier, an engineering company specializing in military systems, had grown from four employees in 1981 to more than 600 employees. Armed with a budget to form a four-person IS group, Hardy's mission was to develop a plan to manage the company's computer resources. But he quickly discovered the company's rapid growth rate, coupled with the absence of any MIS group, had led to a hodgepodge of more than 20 brands of PC compatibles. And two Macs.

"Two technical illustrators had been using the Macs for four years to put manuals together, and no one had supported the users or needed to repair the machines during the entire time," he said. "Meanwhile, the PCs were always breaking down."

To better focus his own limited resources, Hardy decided to change the direction of corporate computing from PCs to Macs. But instead of switching existing PC users to Macs, he decided to encourage new employees to use Macs. With the company expanding at such a rapid pace, the Mac would soon overtake the PC as the corporate standard, he reasoned.

"To be successful in introducing the Mac, we knew we would have to support both systems," he explained.

To implement his Mac strategy, Hardy decided to let new users choose which system they wanted. To do this, he needed to make all the company's system software run on the Mac as well as the PC.

"When a novice sees the same piece of software run on a PC and a Mac, he always chooses the Mac," Hardy said.

New database directions.

Frontier has no mainframe system, relying instead on four Novell LANs. The company has standardized on Microsoft Word and WordPerfect for word processing and uses Microsoft Excel for spreadsheet applications. Performance levels were comparable on both Mac and PC systems, with transparent file transfer capabilities, Hardy said. But finding a common database package was a different matter.

Hardy liked Blyth Software Inc.'s Omnis 3 Plus database for the Mac, and the company agreed to become a beta site for Omnis 5, the PC version of the database running under Microsoft Windows. He said he found that Windows made the Blyth product too slow. Hoping to find a solution, Hardy turned to FoxBASE+/Mac from Fox Software Inc. "Its graphical interface isn't completely Mac-like, but it should solve our problem," he said.

Frontier's move to a Mac standard got another boost when Hardy's boss, Colin Cumming, was promoted to vice president of operations. "The same week I had written a new database system for the Mac using FoxBASE, my former boss moved into his corporate position and asked my recommendation on which computers we should purchase," he said.

As vice president of operations, Cumming was one of the management committee members who ultimately approved Hardy's request for more Macs. He said the ability to run existing corporate software on the Mac was key. "If the IS group's recommendation would have been either use Macs or PCs, we would have stuck with PCs," Cumming explained. "There is too much specialized engineering software that runs only on PCs to abandon them."

Hardy officially won his case for a Mac standard last fall. He immediately leased his first batch of 18 Mac IIs and SE/30s, bringing the company's total number of Macs to 30, compared with about 110 PCs.

"While we will give users a choice, I predict about 90 percent of our future computer purchases will be Macs," he said. The people who prefer DOS machines or need to run software available only in a DOS version will primarily be engineers.

While Hardy is betting that attrition and evolution will convert Frontier into a primarily Mac shop, he wants to ensure that the Mac remains at the forefront of corporate computing. To that end, he brought top executives into the Mac fold with a HyperCard executive information system. "Managers need free-form, Hypertext-type access to data," he said. "Most of them haven't used a computer before and they don't want to waste time learning."

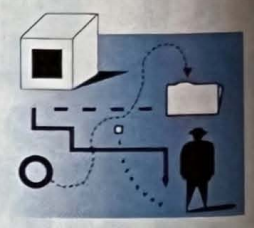
Managers will perceive the value of the Mac by seeing how quickly they become more productive by using the computer. The information system will be designed to grab pertinent data from FoxBASE and give managers a quick glimpse of the information they need to make corporate decisions.

Still, the speed with which the Mac ultimately displaces the PC depends on several factors.

"We try not to develop our own code but instead rely on vendors for our software," Cumming said. "Right now I'm not sure some software packages with both a Mac and a PC version are as compatible as some vendors would have users believe. [But] if the price of the Macs comes down, we will certainly accelerate our purchasing plans."

Still, a concerted effort by the IS group has wrestled the direction of the company's computing strategy away from PCs in favor of the Macintosh.

"From now on we will be purchasing Macs and redistributing PCs," Hardy said. □



One-minute MANAGER

SPA offers anti-piracy kit, looks for illegal copies

Washington — Pressing its anti-piracy campaign, the Software Publishers Association last week announced publication of the Software Self-Audit Kit, a packet of suggested policies, procedures and forms for corporate managers concerned about preventing the illegal use of commercial programs. The free kit includes a sample memo and employee agreement about piracy and copyrights.

The document also offers the SPA's assistance in conducting in-house software audits. Under the program, a representative of the 565-vendor organization observes as hard disk directories are printed out and compared with purchase records. In exchange for a penalty payment to the SPA's Copyright Protection Fund equal to the total retail value of all unauthorized copies, followed by the destruction of those copies, the SPA will "extend or secure appropriate releases for claims of copyright infringement."

The Software Publishers Association is located at 1101 Connecticut Ave. N.W., Suite 901, Washington, D.C. 20036; (202) 452-1600.

Medical developer Greenleaf lends a hand to doctors

Palo Alto, Calif. — Greenleaf Medical Systems, a small medical-products developer, offers the medical industry a high-tech hand with the release of a package that includes a Mac IIcx, measurement instruments, a printer, and software that tests the human hand for impairment and assists doctors with analyzing the data that it collects.

"In a way, we're changing the way they do their practice," said Walter Greenleaf, president of the company. "Very simple, inexpensive equipment is used now. What is expensive is the information processing. At the clinics, all the charts are handwritten."

The complete system, called EVAL, carries a base price of $39,400. "Most of the interest has been from small hand-surgery clinics," Greenleaf said. He said the clinics hope that the EVAL package will save them money in the long run by automating record-keeping and making diagnosis a faster, more precise process.

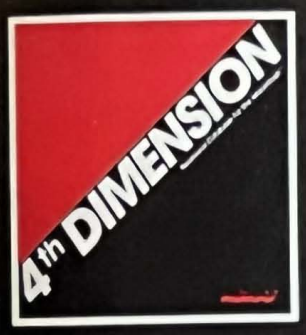
Greenleaf also is exploring the use of DataGlove — from VPL Research of Redwood City, Calif. — for medical and rehabilitative applications. The product is a glove-shaped fiber-optic device that fits over the human hand and measures its movement. Greenleaf is adapting the DataGlove for use in measuring hand and arm functions, and the company is working on connecting it with a Mac II to create a receptionist's workstation for use by physically challenged people. A person who cannot speak, for example, could gesture with the glove to activate prerecorded greetings and to answer phone calls.

A third Greenleaf project involves programming a computer to recognize sign language "spoken" by a person wearing the DataGlove and to translate it into synthesized speech. The setup would allow vocally impaired people to communicate directly with non-signing, hearing people.

"Our role as a sister company to VPL is to develop practical uses for their technology," said Greenleaf, who added that he expects medical products to be a major growth area for the Mac. "We hope to make real contributions in the medical arena." His company is exploring many more areas for the application of its inventions, including sports medicine, ergonomic design, and helping stroke victims relearn coordinated hand movement. Greenleaf also hopes to start a special project that will involve assisting the reconstructive orthopedic surgery team at Stanford Children's Hospital here.

Greenleaf Medical Systems is located at 2248 Park Blvd., Palo Alto, Calif. 94306; (415) 321-6135.

Version 2



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- Import and export SYLK, DIF, and text
- Stores and prints pictures, and pictures with PostScript comments

Layout Creation
- True object-oriented editor
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- "Quick" relational report generator requiring no programming for totals, subtotals, min, max, count, and average
- Automatic mail merge for custom letters and invoices
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- 8 types of built-in color business graphs
- Print to screen, printer, file, serial port, and graph
- Variable length text and picture printing

User Interface Creation
Graphic objects:
- Square
- Rectangle
- Circle
- Oval
- Grid
- Lines

Automatic objects:
- Buttons
- Check boxes
- Graphs
- Thermometers
- Rulers
- Dials
- Radio buttons
- Radio pictures
- Invisible buttons
- Highlight buttons
- Pop-up menus
- Scrollable areas

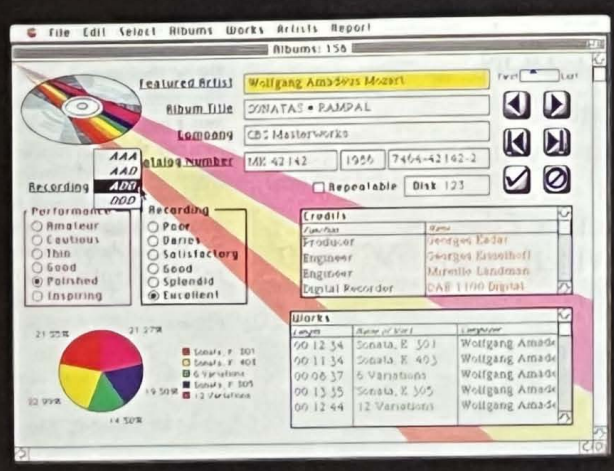
Multi-user
- Compatible with AppleShare, TOPS, and 3Com 3Plus Mac
- Automatic record locking
- Remote data file and local structure file
- Transactions with rollback

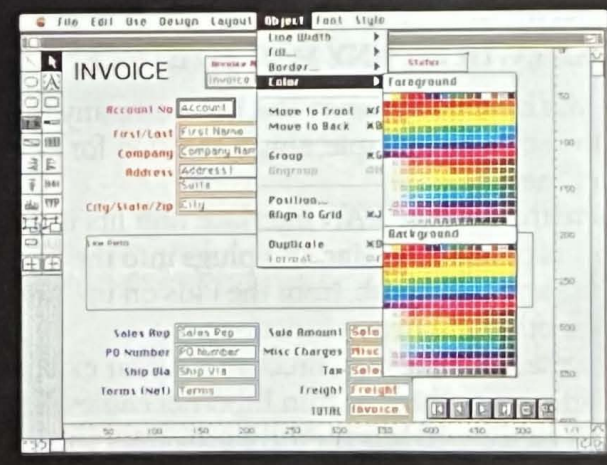
Security
- Password protection of files, layouts, menus, and procedures
- Creation of passwords for users and groups of users
- Automatic repair of data caused by hard disk damage

Programmable
- Over 280 built-in commands
- Over 40 operators
- Scripts for fields and objects
- Objects and fields retain scripts and specifications when copied
- Interactive symbolic debugger
- 7 data types
- Picture management
- Subroutines
- Parameter passing
- Local and global variables
- True one and two dimensional arrays
- 32,000 variables and arrays
- Pointers to data objects
- If and Case tests
- 3 loop structures: For, While, and Repeat
- Extensible with external procedures
- Asynchronous communication via serial ports

System Requirements
- Macintosh Plus, SE, SE/30, II, IIx, and IIcx
- Hard disk required
- AppleShare and MultiFinder compatible
- 1 MB of RAM

Specifications
- 100 files
- Up to 16 million records per file
- Up to 1 billion characters per record
- Unlimited relations between files
- 511 fields per file
- 9 field types: Alpha, Text (up to 32,000 characters), Integer, Long Integer, Real, Date, Time, Boolean, and Picture
- 32,000 indexes
- 32,000 passwords
- 32,000 layouts
- 32,000 procedures
- 32,000 custom menus





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ACIUS

Patrick Chedal

Tech Files

Factoring System 7.0 into buying decisions

With Apple's recent update of its announced plans for System 7.0, it's time for many users to make some choices.

The publicly estimated shipping date — summer 1990 — reflects only about a four-month slippage from estimates last year, so the current date can be treated as realistic. One of the reasons that Apple can feel confident that System 7.0 will ship this summer was that it dropped several features that won't be ready in time, including the print architecture and the new text-layout routines.

There are more than enough features left, however, for System 7.0 to have a greater effect on users than any software change since the Macintosh was released.

Many of these features will require application developers and hardware vendors to begin modifying their products in the coming six months. Since it can take three months to a year for these modified versions to be shipped, the new versions will only begin to be available during the second half of the year.

BY JOEL WEST

Among the most important changes will be the redesign of applications to take advantage of Interapplication Communications (IAC). Since it will require significant work on developers' parts to work with IAC, Apple's new breakthrough will have little effect until the new applications are available. A much easier task for developers will be making applications "32-bit clean" (able to run in Apple's new 4-Gbyte addressing mode) and taking advantage of virtual memory.

Printer drivers (including Apple's) may need revisions to take advantage of outline fonts, as may programs that contain advanced text capabilities, such as page-layout applications.

All software should eventually be revised to take advantage of Apple's new Help Manager, which will provide a standard interface for context-sensitive help across all Macintosh software. But users will see an immediate benefit with the on-line help provided in Apple's software, such as the Finder.

This new Finder — the first full rewrite since it was released — will be among the most visible improvements when System 7.0 ships. Also, System 7.0 will include Macintosh FileShare, the peer-to-peer file sharing software.

These new features will reduce or eliminate the demand for several third-party products. The largest such group will comprise those that perform file sharing, such as TOPS.

How should System 7.0 be factored into buying decisions in the next six months?

There are few reasons to hold off on buying applications, video boards or printers, since these types of software (or the software drivers for the hardware) are likely to be fully upward-compatible with System 7.0. About the only reason to wait would be to see if the software will support some specific new feature.

In two areas, I would purchase only those products that take advantage of new features. One area is the Communications Toolbox, which affects products such as networked modems and serial I/O boards.

Another is software drivers for third-party hard disks. Although existing drivers will work under System 7.0, those that are revised to take advantage of asynchronous SCSI I/O and to be fully compatible with virtual memory should be much faster than those that aren't. How can you tell which to buy now? There's no way to know for sure, but I would expect that any leading drive vendor that has made a major investment in software would continue to do so.

Should you go out right now and buy a PMMU (paged-memory management unit), the Motorola 68851 chip that allows a Mac II to take advantage of virtual memory? I can't see why, because these have been getting cheaper since System 7.0 was announced and they're not much use without A/UX or virtual.

But if you don't already have the recommended 2 Mbytes of memory, buy RAM as you can afford it. More memory is usable even before System 7.0 comes out, and the prices have plummeted: I paid $72 per 1-Mbyte SIMM (single in-line memory module) last month vs. $250 a year earlier from the same dealer.

And with predictions of a weaker dollar, which would raise prices, and overcapacity in semiconductor manufacturing plants, which would *lower* prices, it's hard to predict where RAM prices will be six months from now. □

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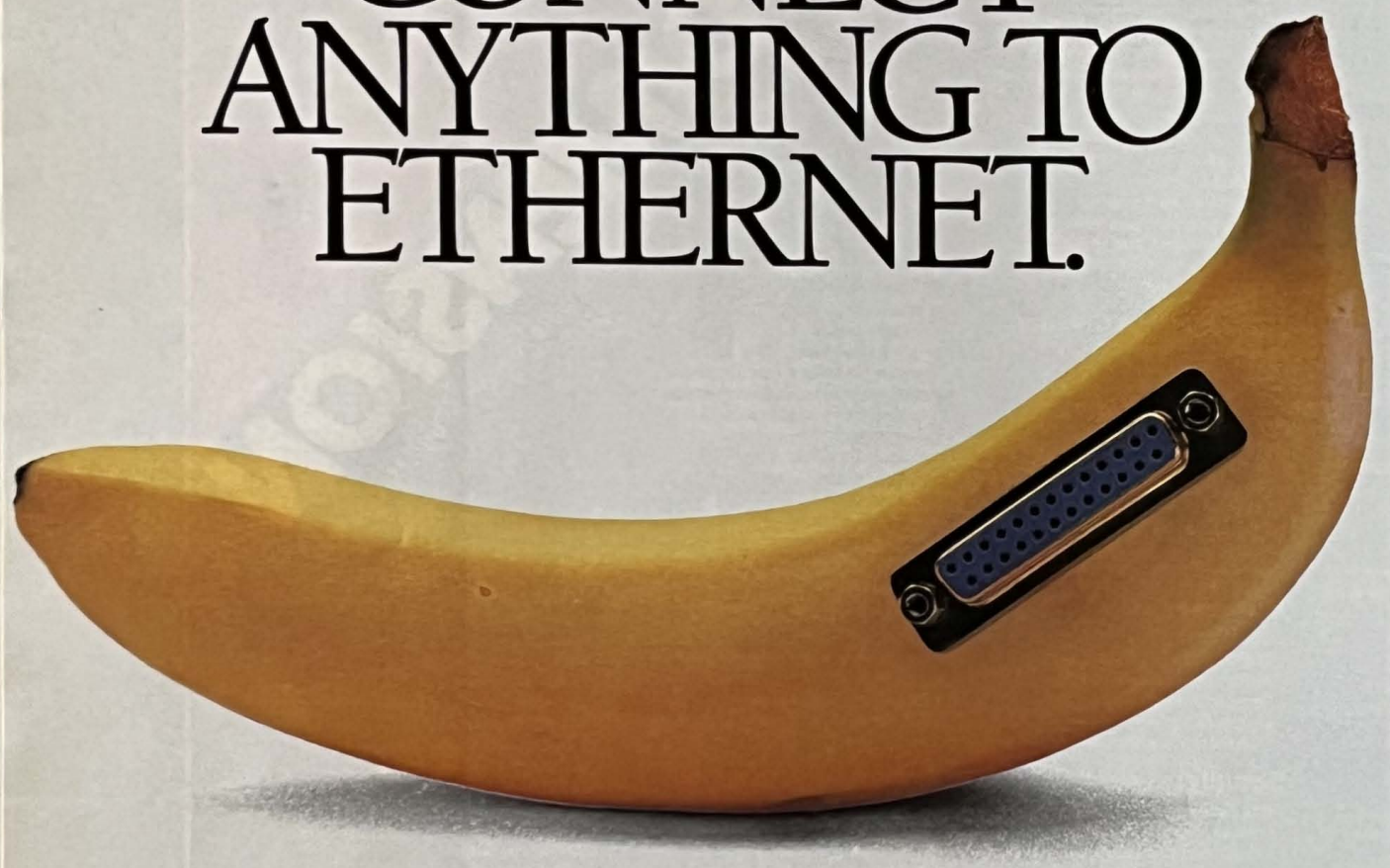

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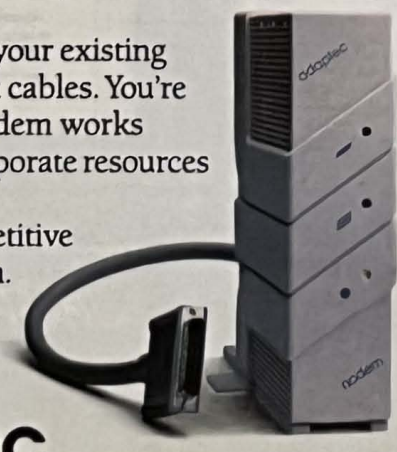

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- ☐ 03. Research and Development
- ☐ 04. Graphic Arts
- ☐ 05. Communications: Publishing, Advertising, Public Relations, Promotion
- ☐ 06. Government: Federal
- ☐ 07. Government: Non-Federal
- ☐ 08. Manufacturing
- ☐ 09. Education
- ☐ 10. Finance: Banking, Accounting, Insurance, Real Estate
- ☐ 11. Health, Medical, Legal
- ☐ 12. Retail, Wholesale, Distribution
- ☐ 13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
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- ☐ 21. Retailer/Distributor
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- ☐ 99. Other Businesses & Services (please specify) _____

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- ☐ C. General Manager/Director
- ☐ D. Micro Manager/Specialist/Coordinator
- ☐ E. Project Manager
- ☐ F. Art Director/Graphic Designer/Artist/Illustrator
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- ☐ G. Sales/Marketing
- ☐ H. Administration/Management/Personnel
- ☐ I. Accounting/Finance
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- ☐ K. Science
- ☐ L. Consulting
- ☐ Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this location?
☐ Yes ☐ No
(Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Purchase (0-12 Months) (Quantity)
Macintosh IIcx/Macintosh IIx	1		
Macintosh IIci	2		
Macintosh II	3		
Macintosh SE/30	4		
Macintosh SE	5		
Macintosh Portable	6		
Macintosh Plus	7		
Macintosh (Other)	8		
IBM/Compatible Micro	9		
Workstation (e.g. Apollo, Sun)	10		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year (answer one only):
- ☐ A. Retailer: sold per year _____ (specify quantity)
- ☐ B. Reseller: resold per year _____ (specify quantity)
- ☐ C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
- ☐ D. Not Applicable

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Division | MS
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Optional: Enter home address below ONLY IF YOUR COMPANY WILL NOT ACCEPT DELIVERY. (Company information is still required.)

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6 Please check the Mainframe(s) or Minicomputer(s) at your location (check all that apply):
☐ 01. VAX ☐ 02. IBM ☐ 03. Other ☐ 09. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?
☐ Yes (If yes, please check all that apply) ☐ No

Computers
- ☐ 01. Macintoshes
- ☐ 02. Workstations
- ☐ 03. Minis, Mainframes

Connectivity
- ☐ 10. Local Area Networks
- ☐ 11. Modems
- ☐ 12. Micro/Mini/Mainframe Links
- ☐ 13. Communications Software

Peripheral Equipment
- ☐ 20. Laser Printers
- ☐ 21. Color Printers
- ☐ 22. Color Monitors
- ☐ 23. Hard Disks
- ☐ 24. Backup Systems
- ☐ 25. Plotter, Charting Devices
- ☐ 26. Scanners

Add-in Boards
- ☐ 40. Memory Boards
- ☐ 41. Graphic Boards
- ☐ 42. MS DOS Boards
- ☐ 43. Ethernet Boards

Software
- ☐ 50. CAD/CAM
- ☐ 51. Graphics
- ☐ 52. Desktop Publishing
- ☐ 53. Desktop Presentation
- ☐ 54. Database
- ☐ 55. Programming
- ☐ 56. Accounting, Payroll
- ☐ 57. Spreadsheets
- ☐ 58. Music
- ☐ 59. Project Management
- ☐ 60. Word Processing
- ☐ 61. Utilities

8 If you help purchase, specify, recommend or approve Macintosh Computers, software or peripherals, for how many MACs do you have this involvement over the course of one year?
- ☐ 01. 500 +
- ☐ 02. 100-499
- ☐ 03. 50-99
- ☐ 04. 20-49
- ☐ 05. 10-19
- ☐ 06. 4-9
- ☐ 07. 1-3
- ☐ 09. None

9 Please indicate the communications capabilities that the Macintoshes at your location have (check all that apply):
- ☐ 01. Local Area Network
- ☐ 02. Communicate with corporate workstations, mini or mainframe computers
- ☐ 03. Communicate with remote mini or mainframe computers
- ☐ 04. Communicate via modem
- ☐ 05. Voice/Data
- ☐ 09. Other (please specify) _____

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COMPARISONS

Three big Macs to go, please

Hefty prices for three new Mac portables are matched by hefty weight.

Apple's Macintosh Portable (left) joins Colby Systems' SE-30 (right) and Dynamac Computer Products' SE/30 (center) to define the portable Macintosh market: They're all-business, faster than a Mac SE, weigh a lot and cost a bundle.

By Tracy Robnett Licklider

Mobility-minded Mac users will need money and muscle to pick up any of the new Mac portables from Apple (see MacWEEK, Oct. 24, 1989), Colby Systems Corp. and Dynamac Computer Products Inc. The price tag for portability begins at $5,799 for the floppy-only Apple Macintosh Portable, hits $6,699 for Colby's SE-30 base model, and tops out at $8,995 for the loaded Dynamac SE/30 (a stripped-down model is not available). These hefty prices are matched by hefty weight. Apple's portable weighs just under 16 pounds with an optional 40-Mbyte hard disk, Colby's SE-30 is just over 16 pounds (with an optional 180-Mbyte hard disk and internal battery), and Dynamac's entry runs about 18 pounds with a 40-Mbyte hard disk. Moreover, these poundages do not include the weight of a carrying case, extra batteries, adapters, rechargers or other accessories.

Apple insides. All three portables are based on Apple-produced motherboards. The Apple Macintosh Portable has an all-new low-power-consumption design based on the Mac SE, but its 68000 processor runs at almost twice the speed of the SE. Dynamac and Colby, two companies that pioneered Mac portables with SE-based machines, have leapfrogged Apple with 68030-based units that contain Apple Mac SE/30 motherboards. The units also have Apple ROMs and run Apple system software. They therefore have no software compatibility problems that we could detect. They can also, therefore, use up to 8 Mbytes of standard 1-Mbyte dynamic RAM SIMMs (single in-line memory modules), which are much cheaper than the special low-power static RAM cards required by Apple's portable. The Apple machine can accept only 4 Mbytes in its single RAM expansion slot.

The size of the motherboard basically defines the portables' dimensions. All three computers measure roughly 4 inches tall by 15 inches long. At just under 15 inches, Apple's portable is the widest. The Dynamac portable is 14 inches wide and the Colby squeezes in at about 12 inches. None of the units perches comfortably in your lap, and stowing them in their cases under airline seats may pose a challenge. Furthermore, the computers were not designed to be used in their carrying cases. Soft carrying cases are standard equipment for the Apple and Dynamac units and a $129 option on the Colby.

Keys, mice, screens. The Apple and Dynamac portables come with standard Mac keyboards without a keypad. Oddly, the Colby unit employs an IBM PC-style keyboard complete with 12 function keys and a numeric keypad. It relocates the Command key to the position occupied by the Control key on a standard Mac keyboard; Option-Command produces the Control key, the Return key is labeled Enter, and the Arrow keys are embedded in the numeric keypad. Practiced Mac typists face some awkward moments retraining their fingertips on the Colby.

All three units provide Apple Desktop Bus ports for connecting pointing devices. The Dynamac and Colby units use the standard SE/30 mouse, while Apple makes a special low-power-consumption mouse for its Mac Portable. Nonetheless, using a mouse as the pointing device for a portable and would-be laptop can be problematic. Apple solved the problem with a trackball device that can be used instead of or in combination with the mouse. It sits to the right of the keyboard with a large button like a space bar below it that functions as a mouse button. Apple's clever design permits the keyboard and trackball to trade places so that the trackball can sit to the left of the keyboard to accommodate left-handed users. The trackball can also be popped out and replaced with an optional numeric keypad.

The Dynamac and Colby models use tried-and-true backlit electroluminescent LCD displays. Both offer good contrast but provide essentially only one viewing angle. The Colby has slider switches on the screen panel to control brightness and contrast, and it has a switch to flip between standard black letters on a white background and white letters on black. This handy feature lets you choose the best configuration for your lighting conditions.

Colby's light-blue screen is smaller than the others. While it provides the standard 512-by-356-pixel display of the SE/30, it does so at about 75 dpi rather than the standard 72 dpi. Dynamac's yellowish screen is

See Comparison, next page

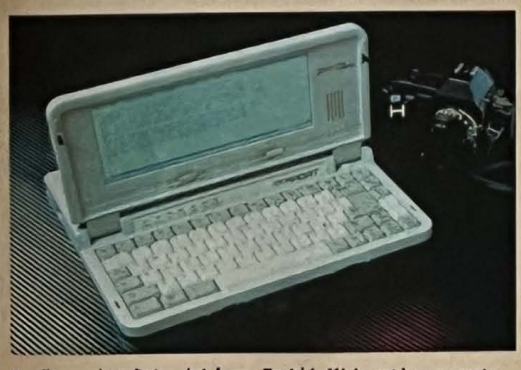
TRENDS

Portable alternatives: MS-DOS may be the way to go

By Dale Coleman

Few new Mac models have been subject to more speculation and eager anticipation than Apple's Macintosh Portable. When it finally arrived, the industry collectively oohed and ahed over the crisp high-tech display, the refined trackball, the robust battery recharge and its extremely high degree of Macintosh compatibility.

At the same time, the price expanded the concept of sticker shock, and its hefty weight and elephantine dimensions gave some potential purchasers permanent pause. Recent sales activity (see MacWEEK, Jan. 16) indicates that, after a surge of sales that satisfied pent-up demand, the Portable is languishing in dealer storerooms. At the same time, the portable market in general, composed primarily of MS-DOS-based machines and ranging from powerful, feature-laden Intel 80386 machines to the hot new notebook models, is enjoying robust sales. And the popularity of MS-DOS-to-Mac transfer utilities, such as Traveling Software Inc.'s LapLink Mac and MacLinkPlus from Dataviz Inc., indicates that a meaningful proportion of those sales are going to Mac users who have chosen alternatives to Apple's offering because of availability, size or price.



Small enough to fit in a briefcase, Zenith's Minisport is representative of the new breed of lightweight laptop computers.

What users do. Many things users do with portables neither require the sophistication of Apple's Mac Portable nor justify its expense. According to Roger Strukhoff, editor of Portable Computing Magazine, portables are primarily used for dictating memos, taking notes, working on relatively simple spreadsheets and databases, and telecommunicating. "For these uses, Apple's portable is just too much money," he said. The larger MS-DOS portable market offers a variety of low-cost solutions for this category of user. "Intel 8088- or 8086-based laptops with dual floppy drives are commonly available for less than $1,400 — the Toshiba 1200, for instance," he said.

Size and weight are also important. "I'd rather have a smaller DOS machine than the Mac Portable," Strukhoff said. "When you're on the move, size and weight are everything." The emerging field of notebook computers offers an attractive alternative for these users. Compaq, Toshiba and NEC all offer IBM XT-class performance in small packages weighing 4.4 to 7 pounds for about $3,000. (See "Taking note of new 5-pound portable computers," Page 36.)

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Comparison *From previous page*

larger than that of an SE/30, and its software lets you use either 512 by 356 pixels or 640 by 400 pixels. Apple's Mac Portable lets you use 640 by 400 pixels exclusively.

For the screen on its portable, Apple uses a non-backlit "active-matrix" display with excellent contrast and speed. In addition, the Apple screen is the only one that can be adjusted to provide a wide range of viewing angles. Without back lighting, the Apple design consumes much less power, contributing in part to the Mac Portable's longer battery life. However, since the display produces no light, it cannot be read in dark or dimly lit places.

Apple's active-matrix design means that the cursor tracks smoothly across the screen. A common failing of passive LCD displays, including the Dynamac and Colby screens, is that the cursor jerks around when moved rapidly because the display is not fast enough to keep up.

Batteries. Both the Apple and Colby units can operate on either batteries or AC power; the Dynamac runs only on AC power. Apple's Mac Portable uses a lead-acid battery that delivers six to 10 hours of use. The Colby uses an optional internal NiCad battery that lasts for only two to three hours of use. Colby also offers optional vehicle cigarette-lighter adapters and external battery packs. The external battery pack is recommended for extended periods of use since, unlike the Apple Mac Portable, the internal Colby battery cannot be changed on the fly.

Connectors. All three portables provide a 1.44-Mbyte floppy disk drive and sport the usual array of Macintosh connections. The Apple and Dynamac portables have ports for video out, external disk drive, SCSI, Apple Desktop Bus, printer, modem, audio and a phone jack. The Colby omits the video-out port but includes a 50-pin key port. Each Colby unit comes with a key plug that must be plugged into the key port for the computer to operate. The key plug is supposed to be removed during carrying or shipping to prevent overheating or running down the battery if the unit is accidentally turned on.

Colby also notes that the key plug provides a "good measure of security, as no one can operate the computer without [one]," although they are interchangeable. The key plug also provides the basis for a unique Colby option: a plug-adapter box that lets you plug everything (mice, phone, speakers, printers, power) except SCSI devices into the box, which then plugs into the key port.

The port connections are at the back of the Apple and Dynamac units. On the Colby portable, they run along the left side; this placement and the short cable provided with the Colby mouse made right-handed use of the mouse extremely awkward. Of the three, only the Dynamac SE/30 can connect directly to all Apple monitors, a big asset for

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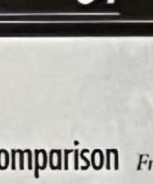


In summary: Portable Macs

You can't get something for nothing, but how much can you get for a lot? That's the question we sought to answer when we reviewed portable computers from Apple, Colby Systems Corp. and Dynamac Computer Products Inc. — three systems that are hefty in both cost and weight. The three are about the same size and fall into the same "over 15 pounds" weight class. All offer wide-ranging compatibility with Mac software and external peripherals.

For your money, the third-party portables provide greater processing power, more hard disk options, brighter (though non-white) screens and better warranties. They also can be cheaply upgraded via RAM SIMMs. But because they use Mac SE/30 motherboards and backlit LCD screens, they have either a significantly shorter battery life or no battery at all.

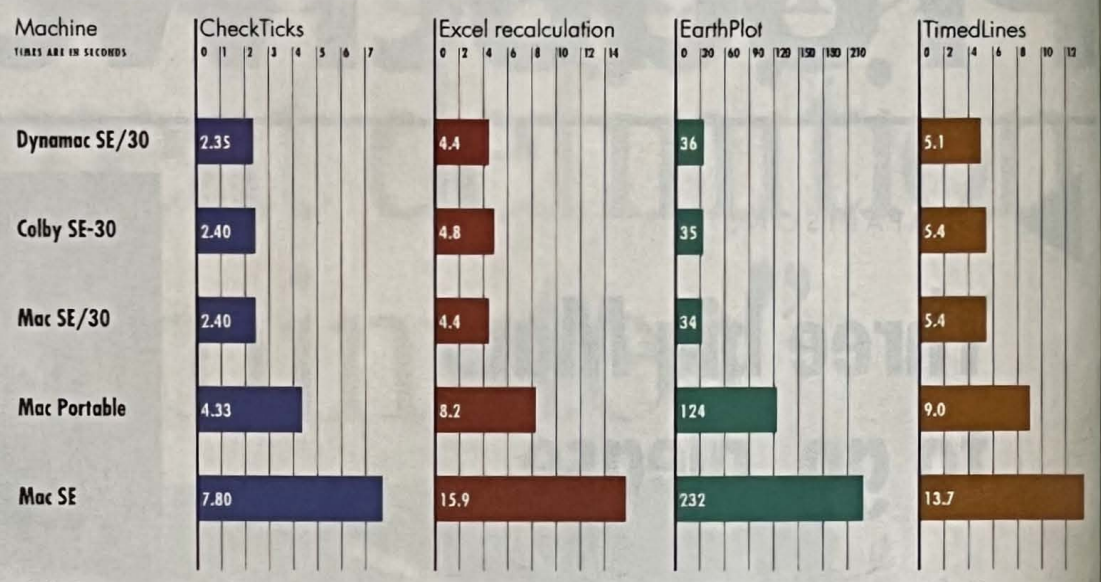
Colby's SE-30 comes in a stripped-down version with expensive options, as opposed to Dynamac's loaded standard model. The Colby is the smallest of the three, weighing in at about 16 pounds with its battery, but it has an odd IBM-style keyboard.

Dynamac's standard features include 2 Mbytes of RAM, a hard disk, an internal fax/data modem, the Sharp Wizard organizer, and the best warranty and support. Our evaluation unit came in last in hard disk performance tests, but faster hard disks are available. The built-in extras push the Dynamac's weight to 18 pounds.

When choosing where to spend your money, processing power, available options and portability will be the deciding factors. If you need maximum processing speed, then the SE/30-based portables offer the best price and performance values. The Dynamac has the edge, assuming you want all its standard features.

If you need true portability, however, you must choose between the Apple and Colby units, since the Dynamac does not have a battery. If you need high performance and special options, get the Colby. But if you value long battery life more than raw processing speed, and want a "true" Mac, the Apple is the recommended machine.

MacWEEK portables performance benchmarks



CheckTicks measures system overhead. Excel shows overall performance. EarthPlot measures floating-point math speed. TimedLines measures video performance. Tests were conducted with System 6.0 software, standard Apple INITs, no Control Panel cache and no debuggers.

MacInTouch

RIC FORD AND RICK LEPAGE

Numbers alone won't make the next Mac

ISSUES & TRENDS

Apple is at the crossroads, and if history serves as a guide, the company could easily veer down the wrong path in its search for big profits deep into the 1990s. We have to remember that the company that gave us the Mac II is the same company that gave us the Lisa and the Apple III.

KEVIN BERGER

Apple CEO John Sculley is poring over his spreadsheet, trying to shake another miracle machine out of Apple. This time he's zeroing in on the "diet" Mac, a low-cost machine that can sell in volume to the markets the Mac missed: small businesses and cost-sensitive departments in larger companies.

The chorus for an inexpensive Mac has been building for years, and it has finally enveloped the highest echelons at Apple. Although this same philosophy was originated years ago by Steve Jobs, Steve Wozniak and Jef Raskin, Apple somehow forgot those roots.

Instead of developing a unit that could anchor the bottom of the Mac line, the company chose to ride the Mac Plus into the ground, holding up its price in an attempt to wring the last drops of profit from a dying product.

The SE, which was a prime candidate for the bottom rung of the Mac ladder, at least offers some flexibility (a single slot) and can be upgraded (to an SE/30). It lacks NuBus, but nonetheless has real benefits for many users.

What Apple should have done when it announced the SE/30 a year ago was kill the Plus, drop the SE to a street price of $1,000, and price the SE/30 at about $2,500. This would have given Apple a low-cost machine with a slot that could be upgraded to to a powerful processor and given color.

Apple's reply to charges of price gouging is that it develops premium computers that require significant R&D expenditures. It is hard for us to believe, however, that the manufacturing costs of the SE were such that Apple could not have offered it at a reasonable price when the design costs were paid off years ago.

Buckshot economics. What Apple has done is apply a shotgun to its own market, scattering machines with little apparent thought to their relationship with each other. Keeping Macs like the Plus around has only helped strengthen the feeling that Apple doesn't really understand the dynamics of the current microcomputer market.

Perhaps if Apple had decided last year that a low-cost Mac was important, the company could have marketed the SE as an entry-level machine and added a 16-MHz headless SE with color ROMs for $800 more. That would have kept manufacturing costs low while holding margins. Now it is too late.

We worry that Apple's planners, led by Chairman John, feel as though a new, low-cost Mac is the magic solution to their woes. Having succeeded only on the high end of the marketplace with bigger, faster CPUs for the past two years, they now stand to reverse their gains by switching the game plan.

Consolidating the Mac. Apple needs to think hard about its whole product line and bring some continuity to it. The Mac IIex is a fine machine that deserves to be the linchpin of the Mac line. Give it the IIci's on-board video and drop the IIci. Put the 25-MHz logic from the IIci into the IIx and flatter the power users with the upcoming IIxi. Keep the SE/30 at a lower price and chop the price of the SE drastically. Give the Mac Portable to 10 guys in a back room somewhere and get a real laptop out at a real price.

Concentrating on either the high or the low end of the marketplace is not necessarily a bad thing, but Apple has to decide who it wants to sell to. At one point in its history, the company tried to keep the two ends of the spectrum apart, with the Apple II line at the bottom and the Mac at the top. Unfortunately, this strategy has been eroded by inertia and competitive market forces. Apple has some strong choices to make in the next few months. Let us hope that Sculley has a feel for the whole spreadsheet and doesn't react solely to changes in individual cells.

We welcome comments at MacWEEK, 4 Cambridge Center, Third Floor, Cambridge, Mass. 02142, (617) 497-2600; (617)497-2646 (fax). Electronic Mail: CompuServe: (Ric Ford) 75410,2612, (Rick LePage) 76117,1765; GEnie, America Online, Delphi, PAN: MACWEEKBOS, Connect: RICKLEPAGE, RICFORD; AppleLink: (address to "MacInTouch" in Subject): MACWEEK, Internet: MACWEEKBOSTON@MCIMAIL.COM; MCI Mail: MACWEEKBOSTON.

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Taking note of new 5-pound portable computers

While Apple has weighed in with a 16-pound entry with a large footprint, the hottest area of the portable market is notebook computers. At least three major manufacturers, Compaq Computer Corp., NEC Technologies Inc. and Zenith Data Systems, now offer computers in the 5-pound range with dimensions similar to those of a notebook.

The Compaq LTE, NEC Ultralite and Zenith Minisport all offer full-sized keyboards, readable backlit LCD displays and raw computing power about twice that of the original IBM PC. The Compaq LTE even includes a 1.44 Mbyte floppy drive where disks can be read on Macs equipped with the new high-density floppy drive and Apple File Exchange or Dayna Communications Inc.'s DOS Mounter utility. An external 1.44-Mbyte drive is an option on the other two units. All three laptops are approximately 1.5 by 11.5 by 8.5 inches, range in weight between 4.4 and 7 pounds and carry a retail price of about $3,000.

These define the cutting edge of lightweight portables — and they're small enough to fit in a briefcase and powerful enough to be a second computer. — *By Dale Coleman*

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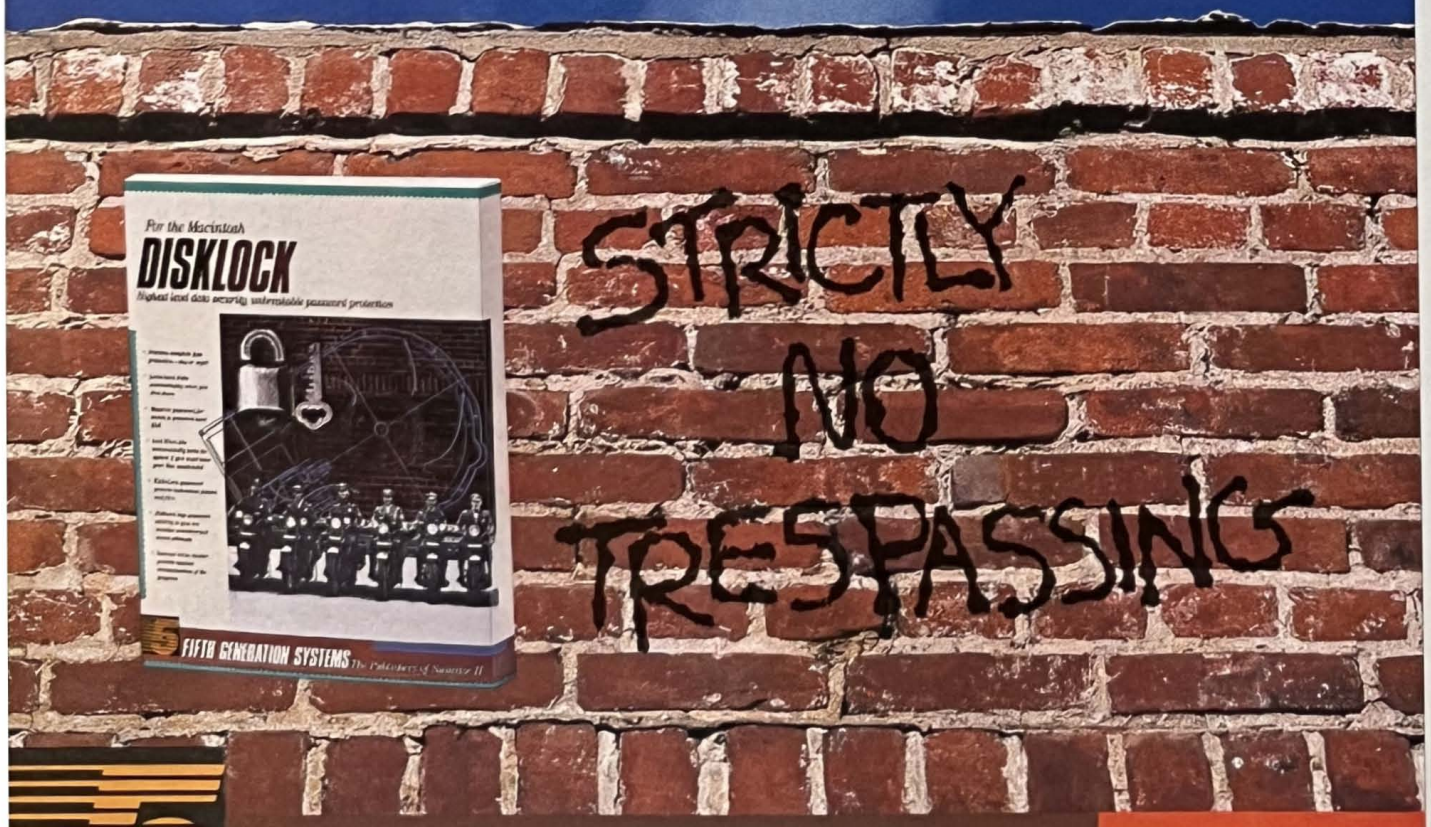

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Trends

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Cost. Cost is also a consideration. Bruce Wolfe is vice president of Attorney's Briefcase, an Oakland, Calif., company that develops legal reference software for attorneys. The company is also an Apple Partner. "The price of the Apple portable is appalling. It's a beautiful machine, and I want one. But even with a hefty developer's discount, I'll be waiting a while before I get one," Wolfe said. "The appearance of price gouging is hard to refute. I'll think long and hard before I take the plunge."

Although Wolfe currently uses a Compaq SLT-286, an 80286-based portable, he said the Mac Portable is alluring. "If I had had a choice between the Compaq SLT-286 and the Mac Portable at the same price when I got the Compaq, I would have gotten a Mac," he said. "Unfortunately, my needs could not wait for Apple to finally release its offering."

"The price of the Apple Mac Portable is appalling. It's a beautiful machine, and I want one. But even with a developer's discount, I'll be waiting a while before I get one."

Wolfe uses his portable primarily when he travels. "I'm on Connect constantly, using its electronic mail to keep in touch with consultants," he said. "It's extremely important to keep in touch, and having a computer with me on the road makes it possible." Since much of his work is in HyperCard, he uses HyperPAD from Brightbill-Roberts & Co. Ltd. of New York on the Compaq and HyperCard on the Mac. For telecommunications he uses Procomm, from Datastorm Technologies. For word processing and spreadsheet work he uses Microsoft Word and Excel on both platforms.

To transfer files between the two machines Wolfe uses the high-speed direct-cable connection supplied with MacLinkPlus. A similar solution is possible via LapLink Mac. Irene Wenger, administrative manager and resident chief Mac enthusiast at ManageWare Inc. in Stamford, Conn., uses Excel on a Mac Plus at the office and Windows Excel on a 386-based Toshiba 5100 on the weekends when she is away from the office. "I use LapLink Mac to transfer worksheet files between the two machines on a regular basis, and it works flawlessly," she said.

The ugly interface issue. Few would deny that the traditional DOS interface is less attractive and more difficult to learn than the beloved Mac interface. However, horrifying reports of the difficulties of learning the DOS interface have been somewhat exaggerated. Wolfe's opinion is typical. "I don't enjoy the DOS interface, but I put up with it," he said.

Strukhoff said many Mac users favor integrated applications when using an MS-DOS portable. "Microsoft Works 2.0 for the PC is probably most popular, but AlphaWorks (from Alpha Software Corp.) and WordPerfect Executive (from WordPerfect Corp.) also have their adherents," he said.

Mac users attempting to learn the PC version of Microsoft Works will be pleasantly surprised. Most of the standard features of the Mac interface are incorporated into the program, including standard selection tech-

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those who want to use their portable as a desktop machine as well. No separate video cards are necessary for monochrome displays on the Apple 12-, 15- and 21-inch monitors, or for eight-bit color on the 13-inch monitor. Apple plans to provide a similar capability for its portable sometime in 1990.

Colby offers an optional video adapter to connect its unit to a 14-inch Colby BigTop monochrome monitor, and the unit can accommodate video cards for 19-inch monochrome and color displays. Prices start at $398 for the 14-inch monochrome adapter and monitor combination and go up to $3,998 for a 24-bit card and 19-inch monitor combination (color will be available in April or May).

All three systems are noisy even when not spinning their disks. The Apple is quietest.

Memory, disk, and other options. The three computers vary considerably in configurability. The Apple and Colby units come with 1 Mbyte of RAM; the Dynamac comes with 2 Mbytes. Apple only offers a 40-Mbyte hard disk. Dynamac offers 40-, 100- and 180-Mbyte internal hard disks; the 40-Mbyte drive is standard. Colby offers 45-, 90- and 180-Mbyte internal options. The standard Dynamac SE/30 includes an internal modem that sends data at 2,400 baud and faxes at 4,800 baud. Apple and Colby offer a 2,400-baud modem as an option.

Another option on the Colby and Dynamac machines is the ability to connect a NuBus

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Outbound takes new tack

First shown last August, and expected to ship soon, the Outbound Laptop System (originally named Wallaby) takes a very different approach to portability than the three machines reviewed here.

First of all, the Outbound does not have its own "brain." It uses the ROM from a regular Mac Plus or SE, which can subsequently be used only with the Outbound system. This brings the list price of the Outbound down to about half the cost of the other laptops ($2,995), and companies upgrading from Mac Pluses and SEs to newer systems may find the Outbound a good way to make use of the older machines.

At 10 pounds, the Outbound is also much lighter than the others. It has a standard 640-by-400-pixel backlit LCD display, and can accommodate a hard disk or floppy drive, but not both. It also has two banks of memory slots, one for up to 4 Mbytes of standard RAM, the other for up to 4 Mbytes of battery-backed RAM, called a "silicon disk" because it maintains its contents even when the machine is turned off.

Batteries are standard lead-acid video camera-type units, costing $50 each, which makes them easy to replace. They power the Outbound for about three hours.

But perhaps the most innovative feature of the Outbound is its IsoPoint pointing device, used in place of a mouse (although a standard mouse also can be attached). This is a horizontal bar at the bottom of the keyboard that rolls and moves side to side.

For those for whom the speed of an SE is adequate, and have a spare machine to attach to the Outbound, it promises to be a light and inexpensive portable alternative.

Outbound Systems Inc. is at 2540 Frontier Ave., Boulder, Colo. 80301; (303) 786-9200. — *By Becky Waring*

Trends

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niques and pull-down menus that are accessible either with an optional mouse or via keyboard commands. These same features are found in Windows Excel and the recently released Windows Word.

The problem of file compatibility between applications is also much less of an issue than in the past. The most recent version of the Dataviz MacLinkPlus/PC, for example, can easily convert most popular MS-DOS files to Mac format and vice versa. A related trend is for Mac applications themselves to be able to read and write several "foreign" file formats. Microsoft Word 4.0 can save files in text, Works, Microsoft Write, MacWrite 5.0 and interchange format (RTF). MacWrite II from Claris Corp. can read and write many popular word processing formats; the latest version can incorporate the entire range of MacLinkPlus/PC.

In addition to MacLinkPlus and LapLink Mac, there are a variety of other solutions for physically transferring files between the two platforms. (For a survey of MS-DOS-to-Mac file transfer products, see David Ramsey's two-part series, MacWEEK, Nov. 21, 1989 and Dec. 12, 1989.)

Conclusions. Macintosh managers and users who require the flexibility of portable computing need not limit their choice to the Macintosh Portable. A careful evaluation of real needs and intended uses may indicate that one of the many smaller, lighter and less expensive alternatives from the crowded field of MS-DOS-based portables is a better solution. □

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Comparison

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expansion chassis, effectively allowing the use of all standard cards for the Mac II family.

Software and support. All three machines come with Apple system software. The Apple and Dynamac portables also include HyperCard. As part of its standard model, Dynamac bundles in a Sharp Wizard electronic organizer; its own MindShare software for managing tasks, appointments and contacts; and software and a cable to connect the Wizard to the Dynamac SE/30. Dynamac also includes Dow Jones' EZ Online software.

Documentation for the three machines varies: Apple's is simply excellent and Dynamac's is adequate. Colby's is skimpy but somewhat amusing. Warranties vary too: Apple's covers a scant 90 days; Colby provides 120 days with an option to extend the warranty for an additional year by paying an additional 10 percent of the system purchase price; and Dynamac includes a full one-year warranty in its base price. Dynamac also offers 24-hour repair turnaround via Federal Express.

Benchmarks. MacWEEK ran a suite of benchmark tests on the review machines (see chart, Page 34). As expected, the Mac Portable performed compute-intensive tests about twice as fast as a standard 8-MHz Mac SE. The SE/30-based Dynamac and Colby units ran compute-intensive benchmarks in about the same time as a standard Mac SE/30. However, the units turned in widely different results on our hard disk tests, reflecting the different hard disks installed. The Colby 180-Mbyte hard disk did best — it was about 20 percent faster than the Apple 40-Mbyte drive. The Dynamac 40-Mbyte hard disk was about 80 percent slower than Apple's, but the company also sells its unit with larger hard disks that are likely to be faster.

Behind MS-DOS. While this trio of machines ushers in an era of conveniently luggable Mac computing, portable Macs still trail portable MS-DOS machines in variety, lightness and affordability. There are no notebook-sized Macs, no pocket-sized Macs and no portable Macs for less than $1,000. Macs are behind to some extent because Apple took a long time to produce a portable and because Apple is the sole source of the essential Mac ROMs.

In the meantime, your choice will depend in large part on whether you require a battery. The Dynamac must plug into an AC power source, limiting its range. However, its standard package is the best value in high-end Mac portables for the money and, like the Colby, offers much greater speed and expandability than Apple's machine.

The Colby and Apple portables, when loaded like the Dynamac, are more expensive but offer true portability. With extra battery packs, the Colby can travel just as far as an Apple. Dyed-in-the-wool Mac users may wait for Apple's 68030 portable, but until then the Colby is the only option in battery-powered, high-performance Mac portables. □

Product Info

APPLE
Macintosh Portable: $5,799; with 40-Mbyte hard disk, 2 Mbytes RAM and 2,400-baud modem: $7,597
20525 Mariani Ave., Cupertino, Calif. 95014; (408) 996-1010

BRIGHTBILL-ROBERTS & CO. LTD.
HyperPAD: $149.95
120 E. Washington St., Suite 421, Syracuse, N.Y. 13202; (315) 474-3400

COLBY SYSTEMS CORP.
Colby SE-30: $6,699; with 40-Mbyte hard disk, 2 Mbytes RAM and 2,400-baud modem: $8,286
2991 Alexis Drive, Palo Alto, Calif. 94304; (415) 941-9090

COMPAQ COMPUTER CORP.
Compaq LTE: $2,395
P.O. Box 692000, Houston, Texas 77269; (713) 370-0670

DATAVIZ INC.
MacLinkPlus/PC: $199
35 Corporate Drive, Trumbell, Conn. 06611; (203) 268-0030

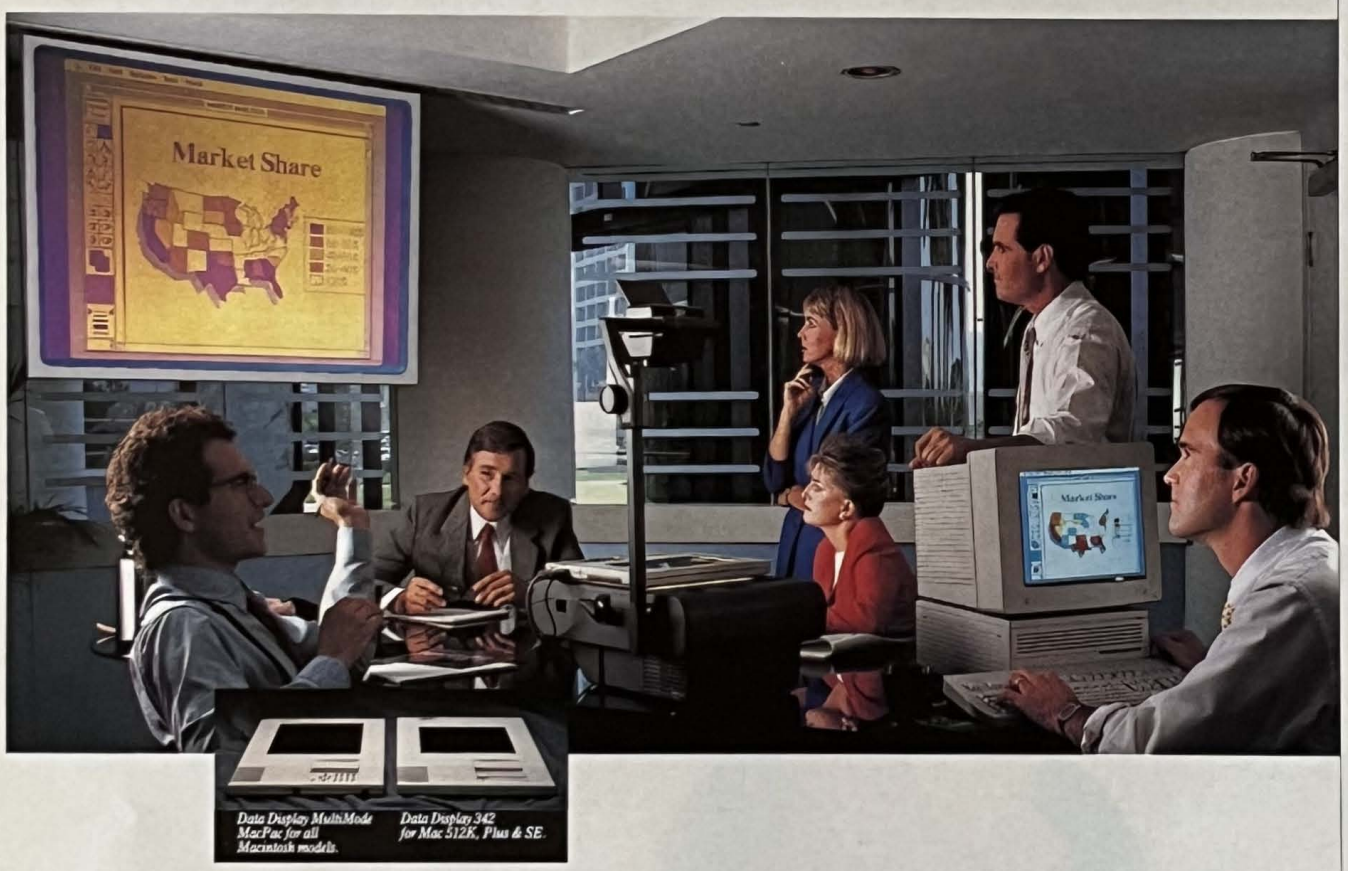
DYNAMAC COMPUTER PRODUCTS INC.
Dynamac SE/30 with 40-Mbyte hard disk, 2 Mbytes RAM, 2,400-baud data/fax modem, Sharp Wizard organizer with connection cable and software, MindShare software: $8,995
555 17th St., Suite 1850, Denver, Colo. 80202; (303) 296-0606

NEC HOME ELECTRONICS INC.
NEC Ultralite: $2,499
1255 Michael Drive, Wood Dale, Ill. 60191; (312) 860-9500

TRAVELING SOFTWARE INC.
LapLink Mac 3.0: $189.95
18702 North Creek Parkway, Bothell, Wash. 98011; (206) 483-8088

ZENITH DATA SYSTEMS
Zenith Minisport: $1,999
1000 Milwaukee Ave., Glenview, Ill. 60025; (800) 553-0331

Power Meeting.



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Proxima Data Displays are available in two Macintosh compatible models. The Data Display MultiMode™ MacPac gives you complete Macintosh compatibility (all Mac IIs and compact Macs) and the best representation of color available to show off your Macintosh color graphics. It comes with its own remote control so you can access both the Data Display and your Macintosh from anywhere in the room.

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Computer Accessories Corporation, 6610 Nancy Ridge Drive, San Diego, California 92121. 619/457/5500. In Europe, contact P.O. Box 165, 6190 AD Beek, The Netherlands, Horsterweg 24, Maastricht Airport, (0) 43-66 32 25/26, FAX (0) 43-64 92 20. Data Display and Proxima are registered trademarks and MultiMode is a trademark of Computer Accessories Corporation. Persuasion™ is a trademark of Aldus Corporation, Excel™ is a trademark of Microsoft Corporation and HyperCard® is a registered trademark of Apple Computer, Inc.

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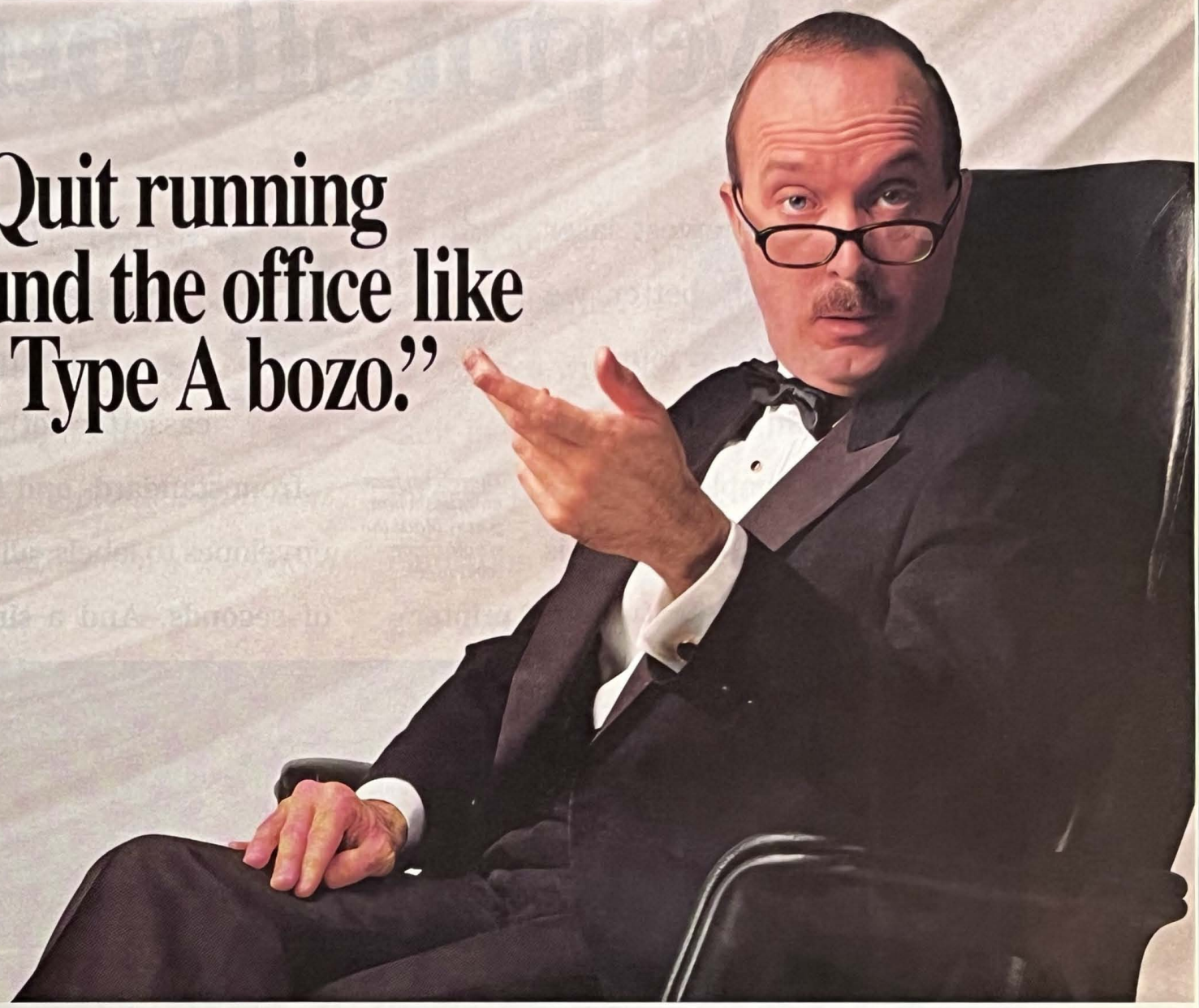

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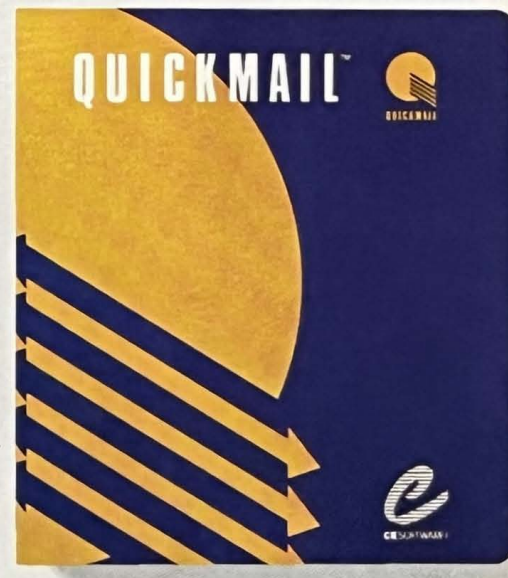

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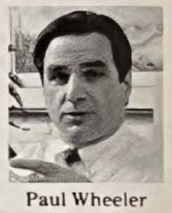

Paul Wheeler
Boise, ID.
"Paper handling."

C&C Computers and Communications

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Holly French
San Diego, CA.
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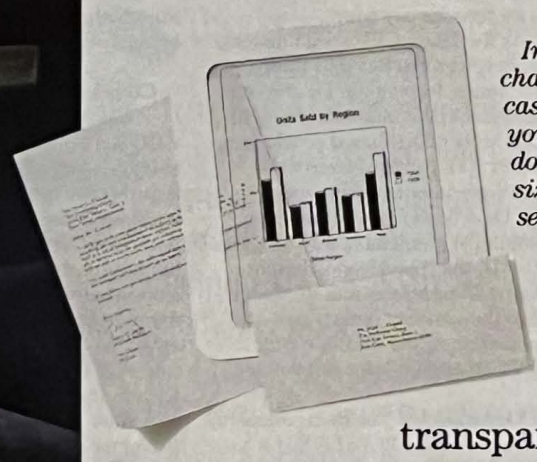

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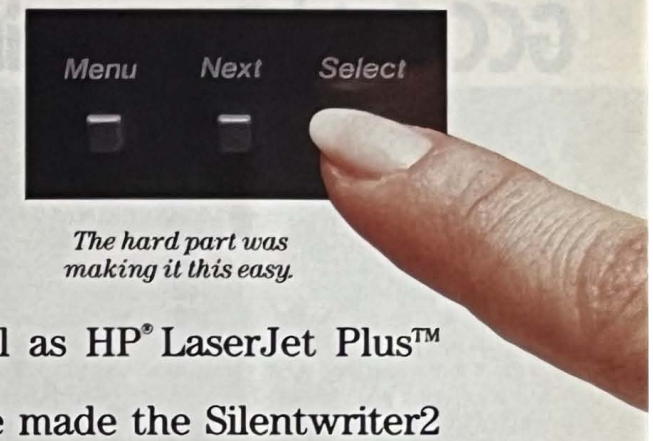

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REVIEWS

PLP II betters original GCC QuickDraw printer

By Rick LePage

GCC Technologies Inc. blew into the Macintosh printer market during the summer of 1987 with the Personal LaserPrinter (PLP) and has not looked back since. The PLP was the first laser printer designed for the Mac that did not use Adobe Systems Inc.'s PostScript interpreter. Many users scoffed at the limitations inherent in the PLP, especially after Apple released its own QuickDraw laser printer, the LaserWriter IISC. GCC persevered, expanding its printer line to include a PostScript printer, the Business LaserPrinter; a low-priced, portable inkjet printer, the WriteMove; and, more recently, a 24-pin dot-matrix printer, the WriteImpact.

Now, at a time when printer giants such as Hewlett-Packard Co. and Tektronix Inc. are jumping full force into the QuickDraw printer market, GCC is hoping to keep the spotlight trained on its stage. The company's latest offering is the PLP II, the direct descendant of its flagship printer. Both are 300-dpi QuickDraw laser printers offered at affordable prices. But the $1,399 PLP II is more than that; it is a true second-generation product, one that inherits the positive traits of its predecessor and omits the negative attributes.

The new design. The current trend in general-purpose laser printer design is toward compactness, and the PLP II is sleeker and lighter than the behemoths that stalked the computer stores in the mid-1980s. Much of this is due to GCC's use of the Oki Electric OL-400 print engine, which fits neatly into a box that is approximately 18 inches square and only 5.25 inches high. While it might be small in size, it can still hold 200 sheets of paper in its input tray.

While it would be easy to tie the success of the PLP II to its engine, the GCC-designed controller card inside the printer plays a big part. Having already developed a laser printer for the Mac, GCC was able to reduce much of the circuitry to a single custom chip, which not only ensures the small footprint of the printer, but also keeps manufacturing costs low.

The result of this synergy is a well-designed printer that offers a number of desirable features. The front of the printer sports an LCD panel that is used to print a test page or to set the SCSI ID number and print density level. The panel also displays the number of pages printed and the percentage of the toner cartridge used.

On the controller board, GCC added a SIMM (single in-line memory module) slot that can be used to add 1 Mbyte of RAM to the PLP II. GCC offers a 1-Mbyte upgrade kit, although any standard surface-mount 1-Mbyte SIMM will work. Installation is simple and quick, and can be performed with common sense and two screwdrivers.

Another attractive feature of the printer is its Sleep mode. Most laser printers, when turned on, operate at full power even if the unit is idle. The PLP II's Sleep mode reduces the printer's power consumption after a user-specified time interval. This also sharply reduces the printer's noise level, although it does mean that the printer has to warm up somewhat the next time a page is printed. The Sleep mode also can be turned off.

PLP II

GCC Technologies Inc.
List price: base unit $1,399; toner cartridge $33; EP Magazine $289; RAM upgrade $139; Dual-Port SCSI Adapter $59

+ Compact, well-designed laser printer offered at an excellent price; outline fonts; can be upgraded to 1 Mbyte of RAM; well-written manual.

− Single SCSI port can cause problems on systems with multiple SCSI drives that are internally terminated; must use GCC Print Manager application to print some documents on 1-Mbyte Macs.

Getting started. Setting up and maintaining the printer is much easier than it was with the first PLP. The PLP II has a two-part consumable system that consists of an electro-photographic (EP) magazine and a toner cartridge, which are included with the printer. The toner cartridges have a life of about 2,500 pages, depending on the mixture of text and graphics printed. The EP cartridge, which contains the print drum, has a rated life of 10,000 to 15,000 pages. Both are easily installed and removed, and we appreciated the reduced risk of toner spillage, which was a major irritation with the PLP.

On the Mac. Installing the PLP software is as easy as setting up the hardware. GCC has developed an Installer application that copies the appropriate printer driver and desired fonts onto the Mac's hard drive (a hard disk is required). Like nearly everything else about this printer, the GCC Installer is well-designed and allows users to customize their setups.

While outline-font technology is now a standard offering, GCC was the first company to offer the technology to the non-PostScript user. By licensing outline fonts from Bitstream Inc., GCC was able to offer high-quality type that looked crisp at any point size. With the PLP II, GCC includes six font families — Courier, Symbol, Dutch (Bitstream's version of Times), Swiss (Helvetica), Swiss Narrow (Helvetica Narrow) and Zapf Calligraphic (Palatino) — and offers a range of other Bitstream typefaces for use with the PLP II. We also used Adobe Type Manager successfully with the PLP II.

Performance. The rated engine speed of the PLP II is four pages per minute, but this is a misleading statistic. We have yet to review a laser printer that even comes close to its rated engine speed. This speed is usually only achieved when the printer is functioning as a copier, printing multiple copies of a single page.

Unlike PostScript printers, which are essentially computers that build the page inside the printer, QuickDraw printers must have the image built completely on the Mac and then sent bit by bit to the printer. This is one reason available QuickDraw printers do not print as quickly as PostScript printers.

The PLP II's performance varies depending upon its configuration and the Mac used. On a stock Mac SE, the PLP II print speed was slightly less than that of HP's DeskWriter, the PLP II's closest competitor. Both machines averaged almost one page per minute. When 1 Mbyte of memory was added to the PLP II, its speed topped the DeskWriter by about 15 to 20 seconds per page.

As the Mac's CPU speed increases, however, the PLP II's throughput jumps, leaving the DeskWriter behind. On the same Mac SE with a 25-MHz 68020-based accelerator, the PLP II averaged nearly two pages per minute, compared with the DeskWriter's 1.25 pages per minute. With memory added to the PLP II, the speed leaped to more than 2.75 pages per minute, faster than the same set of tests performed on Apple's LaserWriter IINT PostScript laser printer.

Drawbacks. The most serious limitation of the PLP II is that it has a single SCSI port, meaning that it has to be at the end of the SCSI chain. The printer is internally terminated, so most users won't have to purchase a SCSI terminator, but those users with multiple external SCSI drives might run into problems getting everything to work properly if their other SCSI devices are internally terminated and the termination cannot be easily removed.

In these cases, GCC sells a dual-port SCSI cable that allows the PLP II to be placed in the middle of the SCSI chain. In this configuration, the termination must be removed from the printer, which is an operation similar in complexity to the RAM installation.

Other problems might arise if users have only 1 Mbyte of memory in their Mac. In some cases, there might not be enough memory to print a document from within an application, in which case it would have to be printed later from within GCC's PLP Print Manager application.

Conclusions. It is not hard to be enthusiastic about the PLP II. GCC has obviously spent considerable time and effort attempting to improve the original PLP, and it has done so with success. In addition to the other, more tangible benefits of the printer, GCC offers a one-year warranty on the printer, a thorough manual and a decent envelope-printing desk accessory (the PLP II also worked fine with Kiwi Software's KiwiEnvelopes and Mark 3 Software's Easy Envelopes Plus).

We think the PLP II is an ideal choice for the user who needs to have a printer connected to his Mac, but doesn't need PostScript. Despite all the activity and products in the QuickDraw printer market from other printer manufacturers, GCC stands tall with the PLP II.

GCC Technologies Inc. is at 580 Winter St., Waltham, Mass. 02154; (617) 890-0880; (800) 422-7777. □

Reviews in Brief: MYM 3.0 • CHECKWRITER II • MACINTAX

Managing Your Money 3.0

Andrew Tobias' Managing Your Money from Meca Ventures Inc. is one of the most popular personal financial management programs available for the Macintosh. Version 3.0 retains the look and feel of earlier versions, but experienced users will notice new keyboard commands, increased efficiency, some menu reorganization and improved search facilities. There is also a new planning tool, IRA Decision Analysis.

MYM's planning tools are its forte; its ability to record checkbook transactions and generate reports based on them is only average. However, several of its financial planning functions are simply not found in other Mac personal finance programs. The stock portfolio module is probably the most attractive.

This module lists your stocks and bonds and allows you to set a paper value, but more importantly, it interacts with all the other modules in the program so your account balances and your net worth and your tax estimator are all updated when appropriate. Other modules allow you to maintain a budget, set reminders with early warnings, and plan for insurance, loan and retirement needs.

The biggest drawback to using MYM is the tremendous amount of information required to make use of all the features. Examples are budget values for all income and expense categories, valuation of all significant assets, and salary and tax information. Once the data is found and entered, however, the program can prove invaluable.

Andrew Tobias' witty and bright personality permeates the extensively rewritten manual, the newsletter and the program itself, greatly relieving the tedium associated with managing your personal finances.

MYM 3.0 lists for $219. An update is free to those who bought MYM in the past 90 days. Others may subscribe to the $49.95 Plus Plan for a free upgrade, free disk replacement and a quarterly newsletter. A new manual is not included in this fee, but one may be purchased separately for $10.

Meca Ventures Inc. is at 327D Riverside Ave., Westport, Conn. 06880; (203) 222-9150. — *By Scott Beamer*

Aatrix CheckWriter II

While CheckWriter II does exactly what its name implies, it takes some effort to set it up. Four programs must be installed. Besides the stand-alone CheckWriter application, the CheckWriter desk accessory allows the user to write and print checks on the fly, the CheckWriter Startup document (INIT) reminds you of bills due every time you start up your Mac, and CheckWriter Setup creates or edits printouts of checks.

With CheckWriter Setup, the user can completely customize check forms, allowing the program to print on any check that can be put through a printer. Custom fields can be added. CheckWriter allows the import or export of data, and reports can be displayed as graphs.

Priced at $59, CheckWriter has more in common with other checkbook programs such as Intuit Inc.'s Quicken than it does with more-expensive and powerful ones such as Survivor Software Ltd.'s MacMoney and MYM from Meca Ventures Inc. The key difference between the two classes of programs is the capability to handle multiple accounts. With CheckWriter (or Quicken), only one file may be open at a time. Each file contains a single bank account, so there is no way to combine accounts in reports. However, the

See Reviews in Brief, Page 52

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MW-MS1

REVIEWS

Tefax: Four office machines in one?

A good midrange fax, but if you need a copier, buy a copier

Tefax RA2110M

Relisys
List price: $1,595

+ Bundled with BackFAX software from Solutions International; fully supports Group 3 protocols; works with either Mac or IBM PC.

− Cannot operate as a data modem and does not include a serial port for daisy-chaining a modem; ties up telephone line while scanning or printing; interferes with other serial port functions.

By Mary Jane Westland

Ah, the ultimate office machine: an all-in-one copier, printer, scanner, fax machine, data modem and telephone answering machine. In many offices there are six separate devices to fill these functions. Is it possible that there's a single machine that can do even four of these jobs and recover an entire table's worth of real estate? Maybe someday. But for now the Relisys Tefax is as close as you will get.

The Tefax, Model RA2110M, is a fully functional, stand-alone Group 3 fax machine. It includes scan and print mechanisms. It's also a fax modem, bundled with customized BackFAX for Tefax software from Solutions International of Williston, Vt.

Tefax shipped last spring with software ported from the DOS world. Switching to BackFAX is a welcome improvement. For those working in mixed shops, TEFAXCOM software for the IBM PC is available separately for $125, as is BackFAX for Tefax at $170.

Tefax, the stand-alone fax. Tefax is a good midrange fax machine. It fully supports the Group 3 protocol, which means it scans and prints at 200 dpi. In halftone mode it captures 16 levels of dithered gray information. Group 3 machines also are much faster than older Group 1 and 2 models. Standard operating speed for the Tefax is 9,600 baud.

Other hardware features specific to stand-alone fax operation include:

- A five-page document feeder.
- Automatic- or manual-answer settings.
- Polling, which allows a Tefax to trigger a transmission from another fax machine with originals in the document feeder ready to go.
- A password to protect against unauthorized polling.
- A subscriber identification check that offers even greater protection against unauthorized polling.
- The ability to switch to voice mode so you can converse with the other fax operator after transmission or reception.

Tefax keeps an activity report of transmissions and receptions and prints it automatically after the 50th transaction. At 14 by 11 by 5 inches, the Tefax unit is fairly compact and folds up into a neat package with a built-in handle for transporting.

It's a fax modem too. BackFAX for Tefax allows Tefax to function as a fax modem. BackFAX sends and receives faxes in the background while running under the Finder or MultiFinder. A Macintosh Plus or better or a hard disk and System 6.0 or later are required. Triple-sized fonts or Adobe Type Manager are required for high-resolution fax transmission of text.

BackFAX for Tefax has been customized and will not drive any other fax modem. It also differs from the version of BackFAX that drives the AppleFax Modem in that it can transmit only faxes, not Macintosh files.

Other fax capabilities added by BackFAX include:

- An automatic cover page that can include predefined stationery and delivery instructions provided at the time of transmission.
- Delayed transmission of fax documents to take advantage of lower phone rates.
- Address books and distribution lists to further automate the transmission process.

BackFAX also keeps an activity log that can be printed or viewed on screen at any time. BackFAX does not include a polling feature, so that must be initiated directly from Tefax.

Installing the BackFAX software is simple. There's a Startup document (INIT), a Chooser document, two special folders and the BackFAX application. BackFAX can be configured to print received faxes immediately through the Tefax, to save faxes to disk, or to print and save, giving you both a hard copy and an archived file. BackFAX also can be set for automatic or manual answer, which overrides the Tefax hardware settings. Password protection in BackFAX protects against unauthorized use of the software, not against unauthorized polling as on the Tefax hardware.

With BackFAX operating Tefax as a fax modem, you can transmit faxes directly from a Macintosh application. When you print through the BackFAX Chooser document, BackFAX converts the printing document into fax format, spools it onto the hard disk, and then transmits the fax in the background while you're doing other work. Within the BackFAX application, you can also con vert MacPaint, PICT, TIFF, Encapsulated PostScript and Glue files and send them as faxes.

If a fax has been received to disk, it can be printed out on a laser printer, making Tefax a plain-paper fax machine. Or BackFAX can convert that fax file into MacPaint, PICT, TIFF and Glue formats for incorporation into other Macintosh documents.

Support for BackFAX for Tefax software is available toll-free through Relisys, not through Solutions International. Relisys does not ship triple-sized fonts with BackFAX but highly recommends the use of Adobe Type Manager. We tested ATM with the Tefax, and it made a tremendous improvement in the quality of our fax transmissions. In fact, we achieved excellent results with ATM, and we recommend its use with any fax modem.

Relisys is positioning Tefax primarily as a stand-alone fax machine and fax modem but also as having the added functions of a copier, scanner and printer. Depending on your quality requirements, these added functions may or may not affect your buying decision.

Tefax, the copier. You certainly wouldn't want to use Tefax for high-volume copying. First, it is a sheet-fed machine, so the original can't be bound or three dimensional. Second, the output is on thermal paper — not exactly cheap or archival quality. Finally, you get only one copy at a time, so if you need several, you have to feed the original through for each copy. But it's better than nothing, and if it saves you steps down the hall to wait in line at the communal copier, this feature might carry some weight.

Tefax, the scanner. If you need clean, high-resolution line art or quality gray-scale images for retouching, this isn't the scanner for you. But if you only occasionally need a tracing template or some "for position only" art, Tefax might fill the bill. You'll have to deal with the disadvantages of a sheet-fed scanner — no bound originals or 3-D objects and somewhat difficult alignment.

And while you're using Tefax as a scanner, it ties up the phone line to prevent incoming faxes from interrupting your work. Resolution choices are 203 by 98 dpi (normal mode) or 203 by 196 dpi (fine mode), and you can scan only at 100 percent of the original size. Only 16 levels of halftone information are captured, not true gray scales.

Tefax, the printer. We would sooner use an ImageWriter. The primary drawbacks of using Tefax as a printer for your Mac are that it uses thermal paper, it lacks a paper cutter, the phone line is tied up during the print process, and your output will print 67 to 74 percent smaller than life size. It might be handy in a pinch or at very low volumes, however.

Conclusions. If you're in the market for a fax machine that is something more than a basic model, you should consider Relisys' Tefax. It has many features of a midrange fax machine at a low-end price, in addition to being able to function as a fax modem. However, if you're also in the market for an office copier, scanner and printer, you should spend the extra money on separate machines for these jobs.

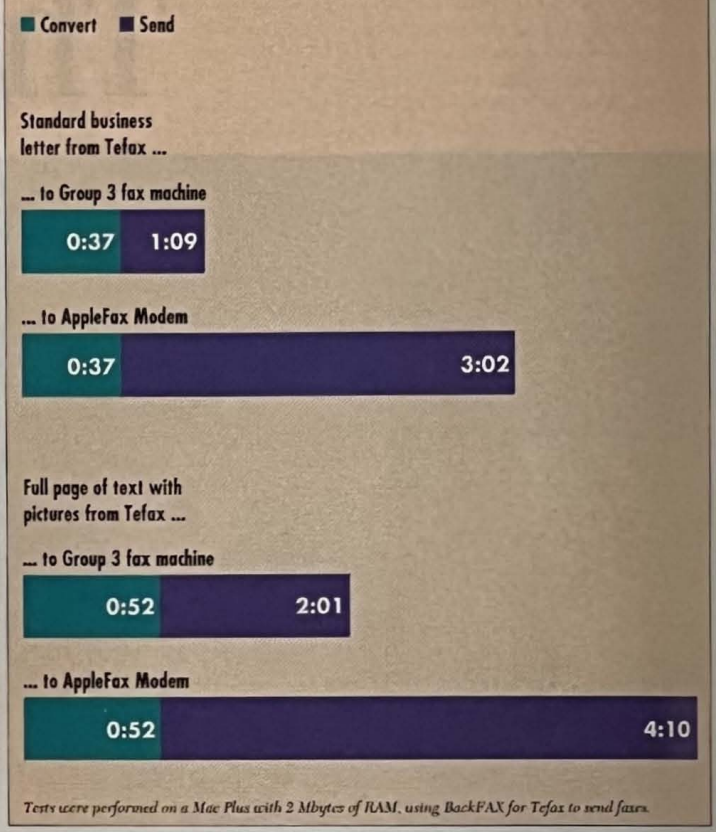
A dedicated phone line is not required to use Tefax, but we recommend one to get the best use of the added features of BackFAX. If you intend to use a data modem on the same Macintosh system as the Tefax, you'll want an A/B serial port switch.

Despite the attractive idea of an all-in-one office machine, the Tefax works best as a solid fax machine that conveniently talks to your Macintosh.

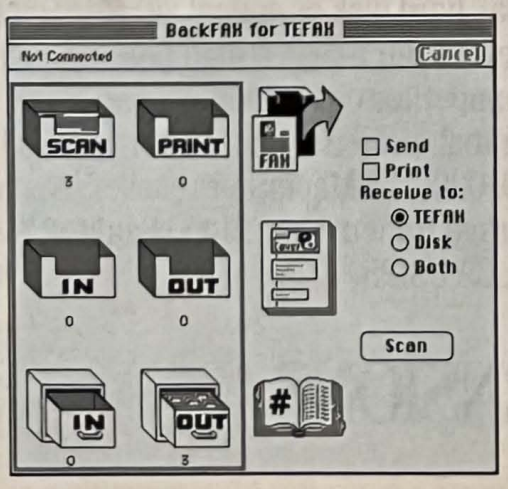
Relisys is located at 320 S. Milpitas Blvd., Milpitas, Calif. 95035; (408) 945-9000. □

Mary Westland is a graphic artist, trainer and writer working in Southborough, Mass.

Tefax timing tests
(in minutes:seconds)



Tests were performed on a Mac Plus with 2 Mbytes of RAM, using BackFAX for Tefax to send faxes.



You navigate through BackFAX for Tefax via icons or menu commands. The scan and print baskets shown here indicate that three images scanned through Tefax are waiting to be processed, nothing is waiting to be printed, and three faxes that have already been sent are archived.

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4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this location?
☐ Yes ☐ No
(Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Purchase (0-12 Months) (Quantity)
Macintosh IIcx/Macintosh IIx	1		
Macintosh IIci	2		
Macintosh II	3		
Macintosh SE/30	4		
Macintosh SE	5		
Macintosh Portable	6		
Macintosh Plus	7		
Macintosh (Other)	8		
IBM/Compatible Micro	9		
Workstation (e.g. Apollo, Sun)	10		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year (answer one only):
- ☐ A. Retailer: sold per year _____ (specify quantity)
- ☐ B. Reseller: resold per year _____ (specify quantity)
- ☐ C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
- ☐ D. Not Applicable

Required: Company name and company street address must be written below or applications cannot be processed. *Please print.*

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Division | MS
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6 Please check the Mainframe(s) or Minicomputer(s) at your location (check all that apply):
☐ 01. VAX ☐ 02. IBM ☐ 03. Other ☐ 09. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?
☐ Yes (If yes, please check all that apply) ☐ No

Computers
- ☐ 01. Macintoshes
- ☐ 02. Workstations
- ☐ 03. Minis, Mainframes

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- ☐ 10. Local Area Networks
- ☐ 11. Modems
- ☐ 12. Micro/Mini/Mainframe Links
- ☐ 13. Communications Software

Peripheral Equipment
- ☐ 20. Laser Printers
- ☐ 21. Color Printers
- ☐ 22. Color Monitors
- ☐ 23. Hard Disks
- ☐ 24. Backup Systems
- ☐ 25. Plotter, Charting Devices
- ☐ 26. Scanners

Add-In Boards
- ☐ 40. Memory Boards
- ☐ 41. Graphic Boards
- ☐ 42. MS DOS Boards
- ☐ 43. Ethernet Boards

Software
- ☐ 50. CAD/CAM
- ☐ 51. Graphics
- ☐ 52. Desktop Publishing
- ☐ 53. Desktop Presentation
- ☐ 54. Database
- ☐ 55. Programming
- ☐ 56. Accounting, Payroll
- ☐ 57. Spreadsheets
- ☐ 58. Music
- ☐ 59. Project Management
- ☐ 60. Word Processing
- ☐ 61. Utilities

8 If you help purchase, specify, recommend or approve Macintosh Computers, software or peripherals, for how many MACs do you have this involvement over the course of one year?
- ☐ 01. 500 +
- ☐ 02. 100-499
- ☐ 03. 50-99
- ☐ 04. 20-49
- ☐ 05. 10-19
- ☐ 06. 4-9
- ☐ 07. 1-3
- ☐ 09. None

9 Please indicate the communications capabilities that the Macintoshes at your location have (check all that apply):
- ☐ 01. Local Area Network
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- ☐ 03. Communicate with remote mini or mainframe computers
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- ☐ 09. Other (please specify) _____

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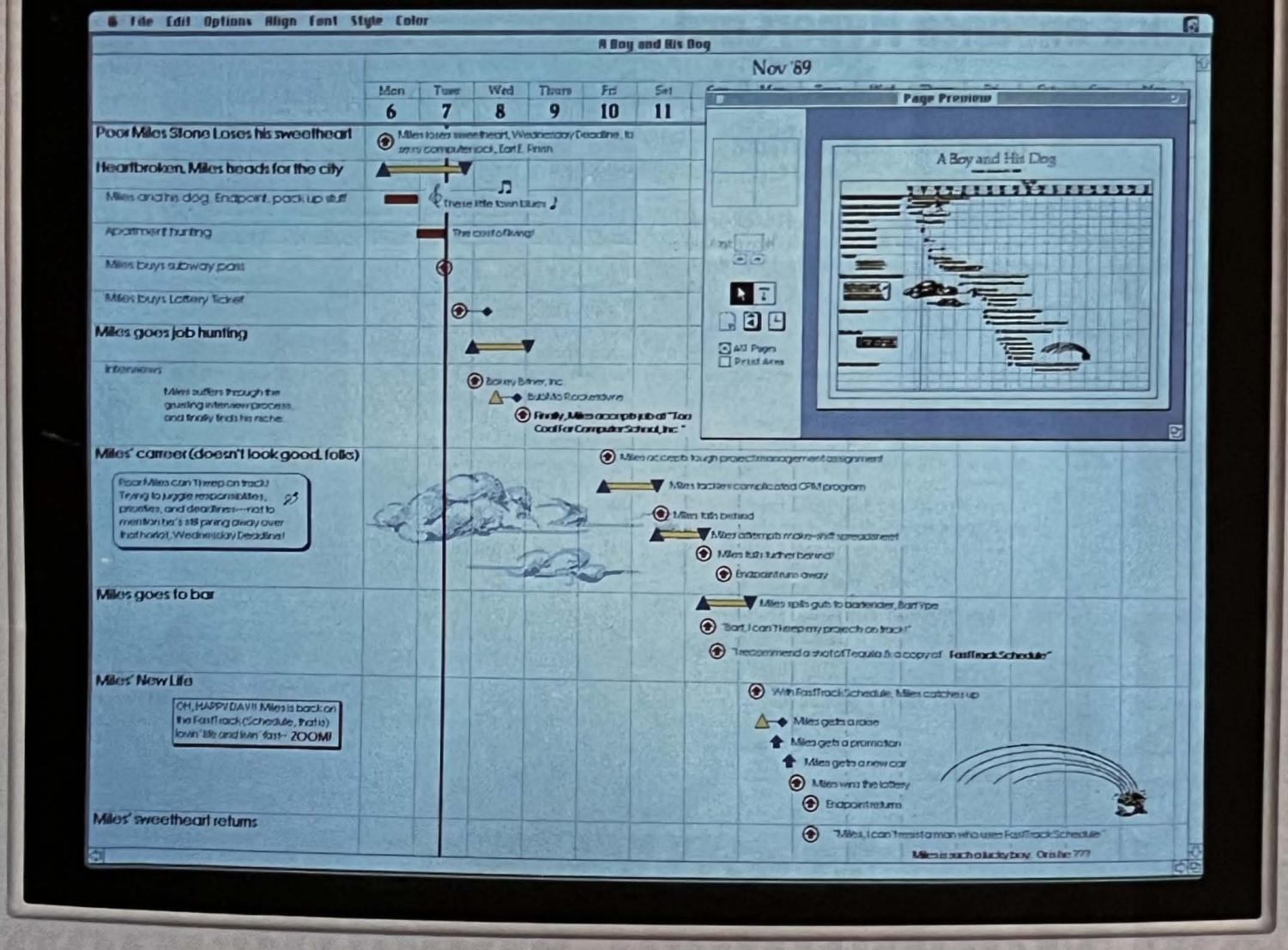
File Edit Options Align Font Style Color
A Boy and His Dog
Nov '89
Mon 6
Tues 7
Wed 8
Thurs 9
Fri 10
Sat 11
Page Preview
A Boy and His Dog
Poor Miles Stone Loses his sweetheart
Heartbroken, Miles heads for the city
Miles and his dog, Endpoint, pack up stuff
These little town blues
Apartment hunting
The cost of living!
Miles buys subway pass
Miles buys Lottery Ticket
Miles goes job hunting
Interviews
Miles suffers through the grueling interview process, and finally finds his niche.
Miles' career (doesn't look good, folks)
Poor Miles can't keep on track! Trying to juggle responsibilities, priorities, and deadlines—not to mention he's still pining away over that harlot, Wednesday Deadline!
Miles goes to bar
Miles' New Life
OH, HAPPY DAY!! Miles is back on the FastTrack (Schedule, that is) lovin' life and livin' fast-- ZOOM!
Miles' sweetheart returns

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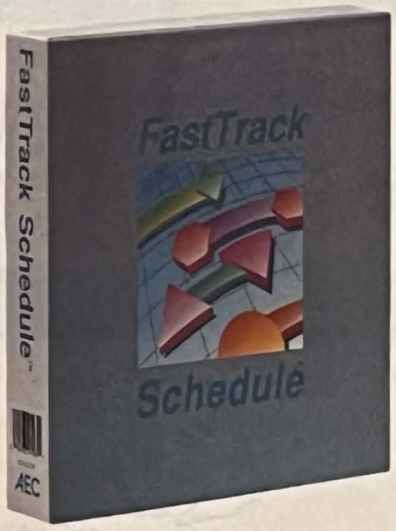


4½

October, 1989 MacUser Magazine

Another quality project-oriented productivity tool from AEC Management Systems, Inc.

REVIEWS

Search engines enhance HyperCard

HyBase 1.2

Answer Software Corp.
List price: $149

+ Many text-based data formats; data storage on disk is efficient; Stretch language is full-featured and object-oriented.

− Supports textual data only; complex, unique language; few examples provided; documentation is poor.

HyperHIT 2.2

SoftStream International Inc.
List price: $195.95; normal site license is $100 per copy for five or more; developer user licensing is $1 to $50 per user

+ Uses modular, individual XFCNs; data retrieval is rapid; supports multiple keys; well-commented examples provided; flexible data structures.

− Documentation is sparse and technical; some XFCN names may conflict with those of other products.

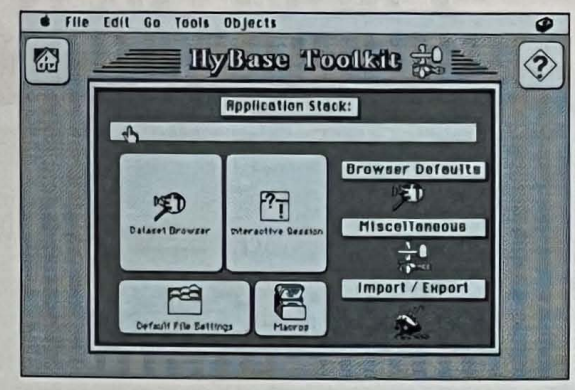
HyBase, HyperHIT add database capabilities

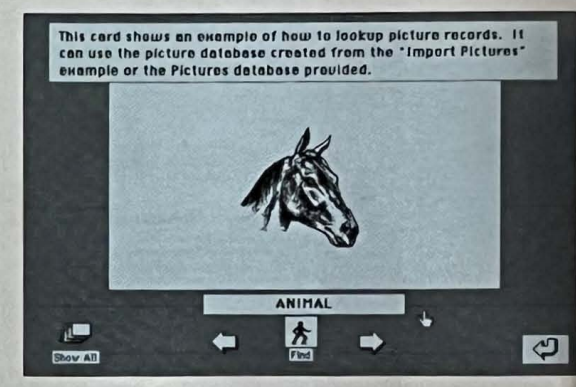
By Raines Cohen

Sooner or later, HyperCard developers who try to make stacks behave like databases will run into problems. While the well-known "software erector set" can store large amounts of data, HyperCard needs help to rapidly retrieve or manipulate it. External search engines provide these capabilities.

HyperHIT 2.2, developed by Griffin Software of Elk Grove, Ill., and marketed by SoftStream International Inc., and HyBase 1.2 from Answer Software Corp. take different approaches to adding external search engines. In the hands of an experienced HyperCard developer, these two tools can dramatically increase the retrieval speed and overall performance of certain kinds of stacks.

Operational methods. Search engines extend HyperCard by providing the tools to store, index and selectively retrieve large amounts of data. With HyperHIT and HyBase the index and often the data are stored in separate files rather than in stacks. The stacks call external code resources to manipulate these files.




This card shows an example of how to lookup picture records. It can use the picture database created from the "Import Pictures" example or the Pictures database provided.
ANIMAL
Show All
Find

Answer Software's HyBase (left) uses a Toolkit stack as a control center for its search engine. While functional, the stack's interface needs some work. The minimalist clip-art stack (below) demonstrates HyperHIT's ability to store and retrieve picture data.

HyperHIT creates Index Sequential Access Method extended hierarchical database files to hold stack data. More than one data file can be open at a time, and more than one key can be used to work with data in a given file. While this is a flexible approach, HyBase sports an even more free-form database management system, with its own control language and environment.

Both packages communicate with stacks by means of external functions (XFCNs). HyBase uses a lone XFCN that understands instructions sent to it as parameters. Such commands must be written in HyBase's custom language, Stretch, instead of HyperTalk. HyperHIT uses more than 35 individual XFCNs, such as DBInit, DBOpen, FindAt, FreeMarker, KeyStatus and WriteSound, for different database functions.

HyperHIT's toolbox approach offers more flexibility and modularity, but the naming of

HyBase/HyperHIT, Page 50

MacWEEK New Mechanical Specifications.

Effective with the March 6, 1990 issue of MacWEEK, vertical trim dimension will downsize by 7/16". The vertical trim size changes from 13-15/16" to 13-1/2". The width of the publication remains the same. Look for new Mechanical Specifications mailing by January 22, for all additional changes.

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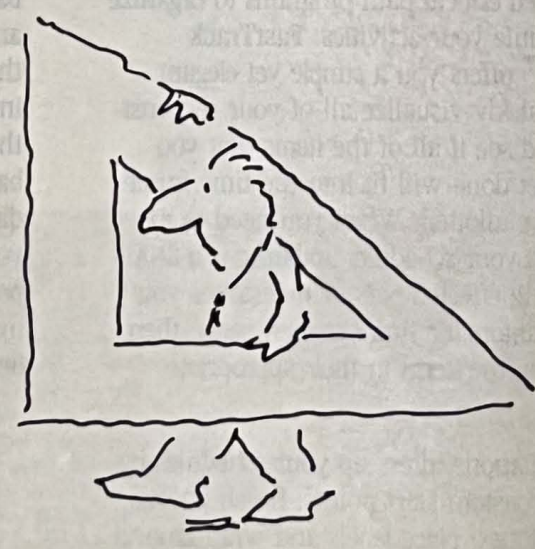

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HyBase/HyperHIT

From Page 48

the functions leaves a bit to be desired. Problems can arise if the package is used with identically named XFCNs, such as those in the Hyper/DB-Library from Sybase Inc. of Emeryville, Calif.

HyperHIT provides storage, retrieval and conversion routines for data items in text, picture, sound and binary formats. HyBase is limited to manipulating textual data, but it supports a large number of text-specific formats, including real numbers, integers, dates, U.S. state abbreviations, strings, enumerated values and user-defined formats.

With either product it is easy to store and retrieve data relevant to HyperCard stacks (such as text items, resource IDs and card numbers), but neither seems to have been built with HyperCard in mind. You'll have to be careful in your communication with these externals.

Language and interface. Both products include installer stacks to put the XFCNs where you want them. The user interfaces of both installers were clunky, as though they were added at the last minute. Fortunately, if you need to incorporate the functions into stacks, you can easily create your own installer and interface.

HyBase includes a Dataset Browser stack for experimenting with the language and working with indexed files. This stack is especially helpful for teaching the Stretch language, which is necessary for manipulating data.

HyperHIT and HyBase use different internal data structures and different methods of access to data.

Stretch is an object-oriented language unique to HyBase. It feels somewhat like a cross between Pascal and C, with many operators and objects, such as implicit conversion between types, included specifically to facilitate data manipulation. Stretch is not difficult to learn if you are already familiar with object-oriented programming, but we would not recommend it as your first such language.

Although a full programming language for indexing and controlling data may be more flexible for involved work, we preferred HyperHIT's modular approach of using individually installed functions. Not only is this technique more common in stack development, it does not require you to learn another language.

Switching languages when programming, especially between ones with similar syntaxes, is a burden. Developers who need only simple functions from their search engine will be penalized by Stretch's steeper learning curve.

Documentation. The manuals for HyperHIT and HyBase are really programmers' reference materials with technical definitions, short tutorial sections and few illustrations. They will be rough fare for the casual scripter.

HyperHIT's manual has many code examples, but they are repetitive. HyBase's manual uses many illustrations of the Dataset Browser — the Stretch equivalent of HyperCard's message box — to help explain the language. The reference section is easier to navigate than HyperHIT's, but the lack of an index makes arbitrary look-ups more difficult.

Both products also include sets of example stacks. HyperHIT's sets are fuller, and the scripts are moderately well-commented. The stack interfaces are just as bad as the installer's, however.

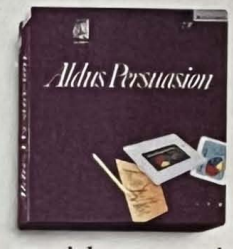
Conclusions. Comparing the performance of HyperHIT and HyBase would not be smart or fair. They use different internal data structures and different methods of accessing data. They are tool kits for development, not finished databases, so their ultimate performance is based on the quality of the scripting. Both engines can store large amounts of data and typically retrieve individual chunks within a second — far faster than HyperCard alone. For both products, importing and indexing a large database is an overnight task.

If you need every edge you can get in manipulating textual data, you should look at Answer's HyBase, but be prepared to learn a new language and to convert various data types into text before taking advantage of the engine's speed.

If you like the flexibility and variety of the HyperCard/HyperTalk environment, you will probably prefer SoftStream's HyperHIT. HyperHIT's modular approach to XFCNs conserves disk space and developer time, and the engine integrates better with stacks and stack data.

SoftStream International Inc. is located at 19 White Chapel Drive, Mount Laurel, N.J. 08054; (609) 866-1187; (800) 262-6610.

Answer Software Corp. is located at 20045 Stevens Creek Blvd., Cupertino, Calif. 95014; (408) 253-7515. □



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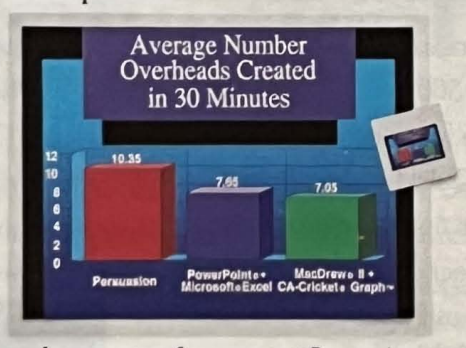

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The Human Interface

Welcome to the Macintosh Hall of Infamy

BY DENNIS KLATZKIN

I've seen all the turn-of-the-year summaries, the lists of 1989's highlights and low-water marks. But it's only fitting to memorialize those whose ignobility transcends the years. Here are my nominations for induction into the Macintosh Hall of Infamy — lasting tributes to the people, products, companies and ideas that prove, despite common logic, that you can augment your quality time with the Macintosh by having a keen sense of smell.

You needn't be well-known to get nominated, nor do you have to be dead — this isn't in the same league as getting your picture on a postage stamp! The only requirement is that enough time has elapsed to prove that no one else can do it worse.

The envelopes, please ...

Apple ImageWriter-LQ: Rumors are Apple will remarket this printer as the ImageWriter-TS. Along with the company's miserable modems and fax thingy (product is too strong a word), it makes the Apple logo a compelling bit of symbology — but how about a wallet with a big bite taken out of it?

Borland International: A company that pulled the rug out from under tens of thousands of Mac users without bothering to tell anyone. Now there's a kick in the side! However, the hidden benefit is that readers of Macintosh magazines no longer have to look at the company's monotonous ads on the inside cover of every issue.

Richard Brandow: The Montreal magazine publisher who single-handedly answered the age-old question, "Where does Canadian bacon come from, anyway?" His infamous message of world peace, in the form of a computer virus, was about as heartfelt as the Christmas card you get from the gas company.

dBASE Mac: A port even stranger than the Barbary Coast or Mos Eisley. It'll have you saying, "I can't believe it's not better."

InterCaps: A hearty "thanks for nothing" to whoever first had the clever idea of embedding capital letters in the middle of product names. Apple didn't invent the trend but the company did bring it to MacDom with MacPaint and MacWrite — and everyone's tried to squeeze mileage out of it ever since. Ironically, the one time this convention might have been applied correctly, it wasn't used at all — for the McIntosh itself.

Phil Lipitz: Along with his company, Ann Arbor Softworks, a guy who made us suffer through the longest and lamest series of excuses ever about why a product (FullWrite Professional) was delayed. The coup de grace was when the trucks laden with the product were "hijacked." Sure! A more likely scenario was that he was trying to use FullWrite to produce the manuals.

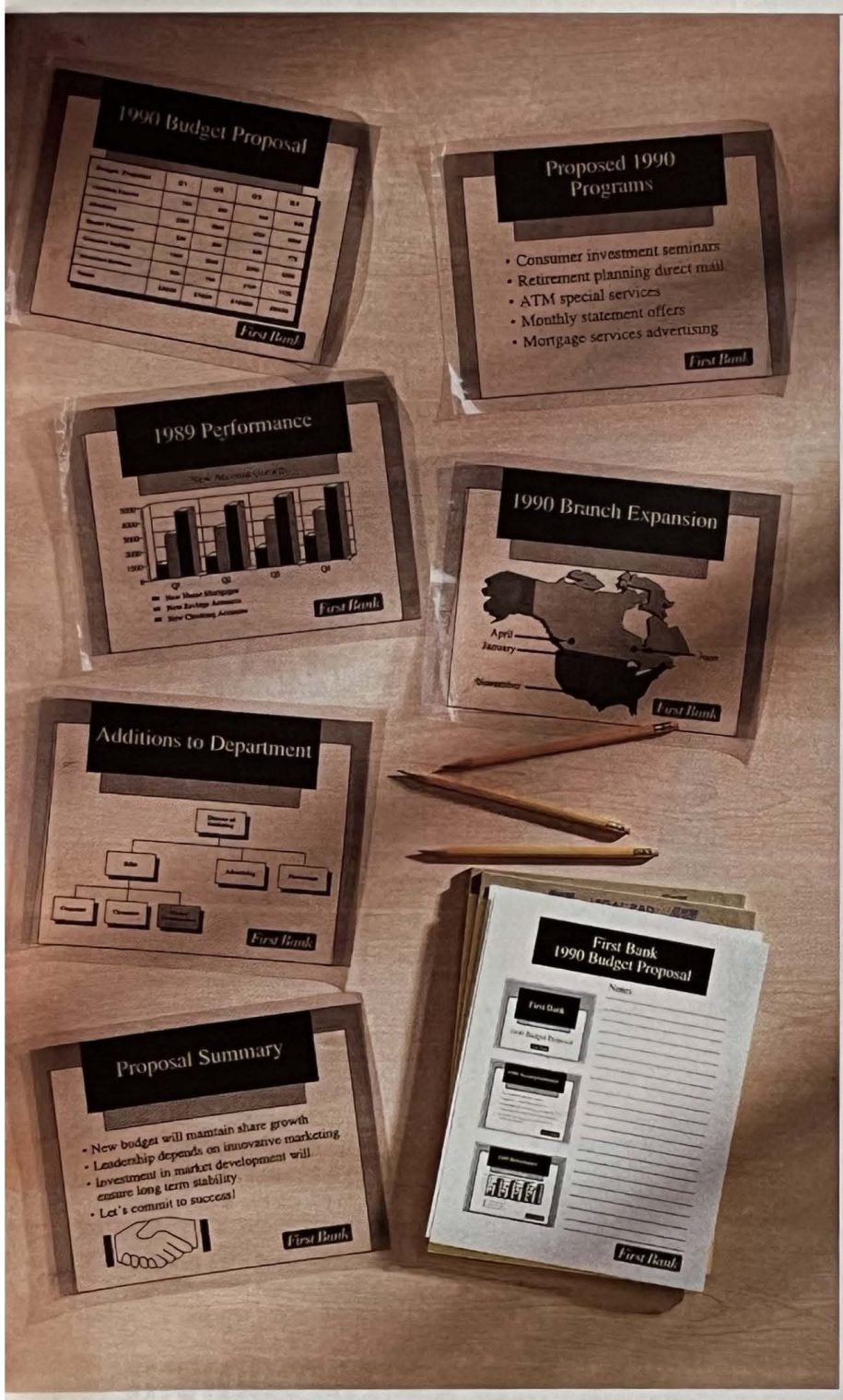
Lotus Jazz: The most overly touted piece of Mac software ever, it wasn't even modern enough for 1985. Microsoft Excel knocked it off the charts quickly, unless you believe the Mac monthly that had Jazz on its weird best-seller list for years afterward.

MacPlaymat: An offensive, sexist, juvenile bit of pornography and humor, although undeniably it was the first attempt at Mac "presentation" software. It was also the only product to ever bring the San Francisco vice squad onto the floor of a Mac expo. Unfortunately, the vice cops didn't then go after Apple for obscene warranty and support policies.

The HeloCar: A late entry but surely a campaign that will "live in infamy." I suspect the public was finally relieved of this insipid, fallow nonsense when the brilliant ad execs who thought it up went to work for Infiniti.

The Mac 512K power supply: Although staunchly defended by Apple's Ministry of Power, it got fried more often than McDonald's burgers and Marion Barry put together. This example of retrograde technology was the moral equivalent of Boeing using rubber bands.

Dishonorable mentions: Apple's 90-day warranties (which make the Reagan safety net look charitable); tedious lawsuits (punctuated by the comedy of Xerox charging others with the crime of copying); desktop media (a technology that promises to do for computing what Luciano Pavarotti did for carpentry); and Microsoft Word 3.0 (enough said). □



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Reviews in Brief

From Page 44

next version of the program, due out shortly, will allow reports to combine figures from various accounts. Though the manual mentions that it is possible to track credit cards with CheckWriter, there are no special facilities in the program for this.

Aatrix CheckWriter II retails for $59. Upgrades are free to registered users.

Aatrix Software Inc. can be reached at P.O. Box 5359, Grand Forks, N.D. 58026; (701) 746-7202. — *By Scott Beamer*

MacInTax 1040, Personal Edition

The key to the MacInTax success story has been the program's excellent use of the Mac interface and its tax forms, which resemble the real thing, both on screen and as printed. Add to this other MacInTax features such as long menus of forms and schedules, numerous worksheets, on-screen and on-line help, more state forms than any other Mac tax package, itemization windows, import capabilities, and a converter utility that fills out as much of this year's form as possible from last year's and as much of the state form as possible from the federal, and the reasons for MacInTax's dominance become more apparent.

Softview Inc. has added new features to the package. The 1990 version was released in mid-December of 1989, earlier than ever, with its price reduced by $20 to $99. It comes with a hefty, spiral-bound manual; more state forms; and an application form to apply for a refund electronically.

MacInTax is not perfect, however. Those who need some of the more obscure forms that the IRS had not finalized in time for the mid-December release will have to send in their registration cards and await a free second disk scheduled for late February. The manual has a cramped layout and is not well-printed.

MacInTax retails for $99. State tax modules for California, Illinois, Massachusetts, Ohio, New Jersey (with a New York non-resident form), Connecticut (also with a New York non-resident form), New York and Virginia are $79. Upgrades are $55 for federal and $40 for state.

Softview Inc. is located at 4820 Adohr Lane, Suite F, Camarillo, Calif. 93010; (805) 385-5000. — *By Scott Beamer*

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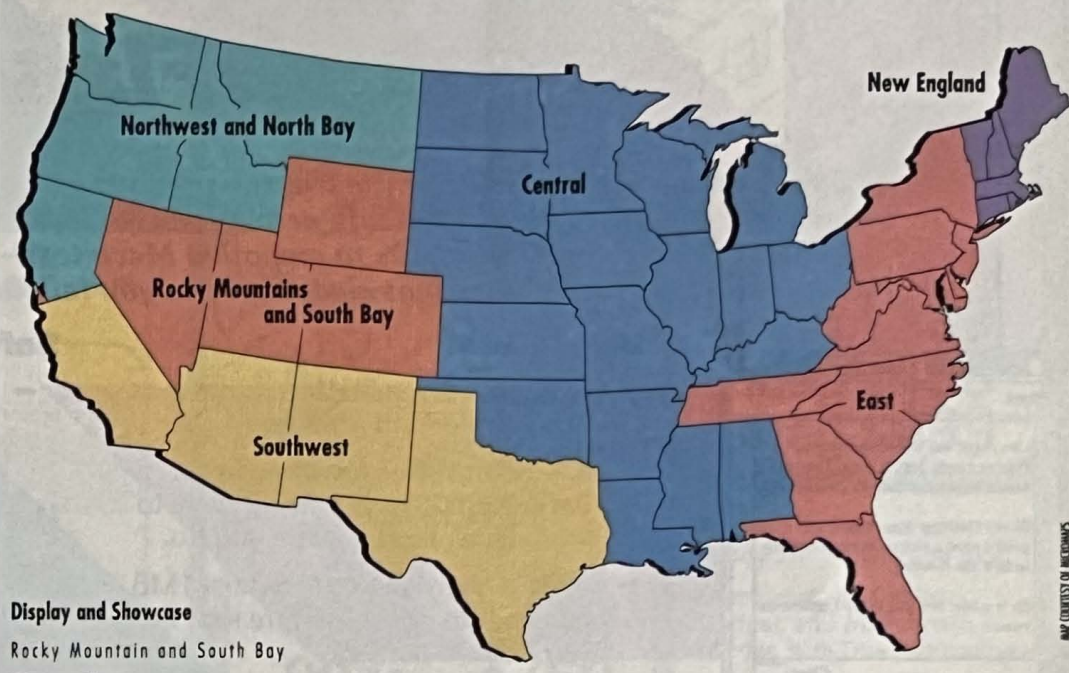

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Flash is the fastest, friendliest file transfer program you can buy for the Macintosh. Unleash the power® of your AppleTalk network with Flash.

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Lisa
Chat
Lisa, I got the Watson account figures ready just in time. The boss wants to get together in 10 minutes!
Oh no! Flash me those files, will you? I need a chance to review them before the meeting.
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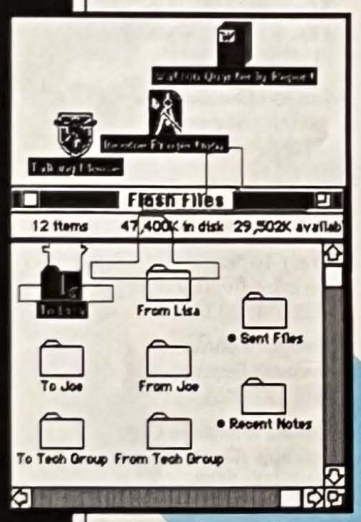
Online
Clear
2

Both people type into the same note pad when chatting.



To send files to a person or group, just drop them in a folder.

Flash is Fast

- To send a file, just drop it into a Flash folder and off it goes!
- All file transfers are done in the background, so you never have to wait. Flash works while you do.
- Flash's transfer rate is almost 1MB per minute. Most files are sent in seconds.

Flash is Powerful

- Flash can send and receive any combination of files and folders at the same time.
- The contents of an entire hard drive can be transferred—while you use both computers!
- Flash can communicate across any AppleTalk network zones that also have Flash installed.

Flash is Friendly

- Flash is perfectly integrated into the Macintosh desktop environment.
- Installation is so easy you'll be *using* Flash in minutes—not just reading about it!
- You can use Flash anytime, from inside any application.
- Flash tells you when your files arrive, so there's no need to keep checking. But, in case you forget, Flash keeps a record of all file transfers.

Software Requirements

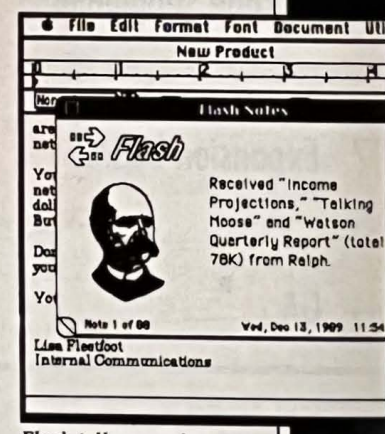
- All Macintoshes on the network must be running System 6.0 or newer.

Hardware You Need

- An AppleTalk compatible network.
- Two or more Macintoshes with a minimum of 1MB of memory.

Hardware You Don't Need

- Hard drives not required—Flash works fine on all floppy-based Macintoshes.
- Dedicated File Server not required—Flash will save you thousands of dollars by keeping all of your Macintoshes free for productive uses.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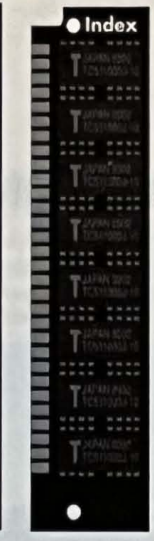

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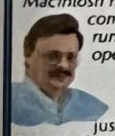

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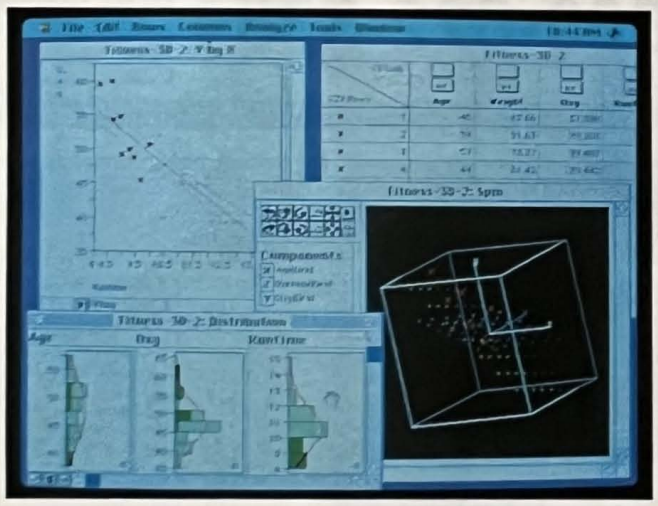

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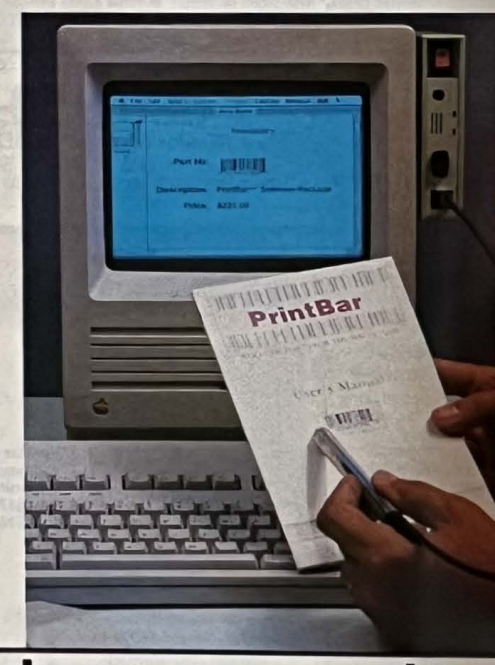

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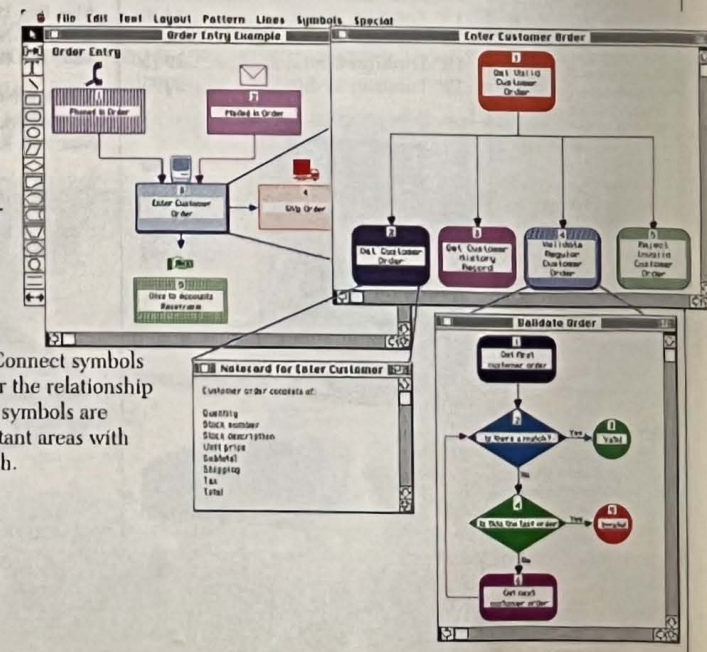

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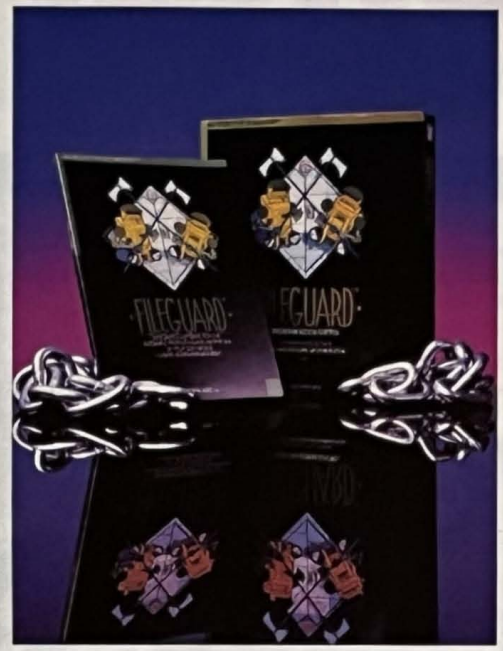

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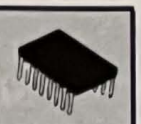

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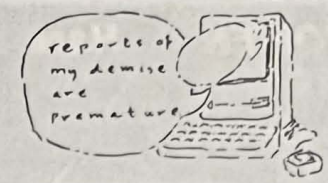

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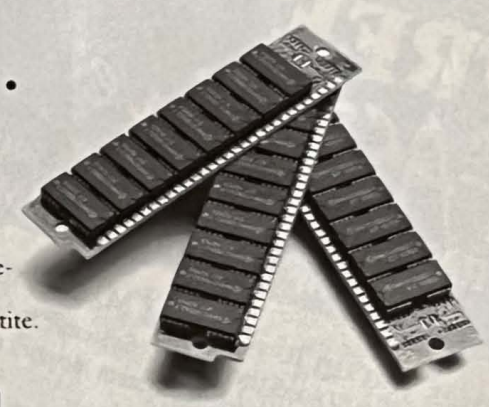

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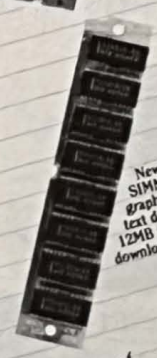

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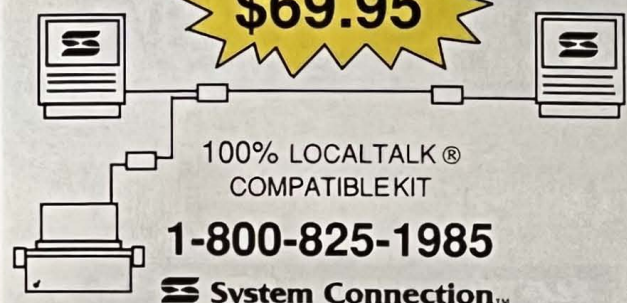

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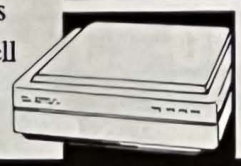

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Court to Apple on Beatles trademarks: Let it be

By Carolyn Said

London — Apple's troubles with the Beatles look as though they're here to stay.

The High Court here this month ordered Apple to stop attacking trademarks of Apple Corps Ltd., the Fab Four's management company. The court also told Apple to pay part of Apple Corps' court costs and attorney fees connected with the order.

Apple Corps sued Apple last February, claiming that the computer company had violated a secret 1981 agreement that allowed it to use the Apple name and logo as long as it stayed out of the music business (see MacWEEK, Feb. 28, 1989). Apple Corps, which evolved out of Apple Records and now represents the Beatles' interests in a variety of areas, cited Apple for trespassing in the music world with the musical instrument digital interface (MIDI); the AppleCD SC; and sound chips in the Apple IIGS and the Mac Plus, SE and II lines.

Stacey Byrnes, Apple public relations specialist, refused to comment on Apple's motivation in seeking the cancellation of Apple Corps trademarks in several European countries. In compliance with the court's order, Apple will now cease those efforts, a spokeswoman said.

The court's decision indicated it thought Apple Corps "has a very high probability of winning in the ultimate trial" scheduled for October, said Wayne Cooper, a San Francisco-based attorney who is Apple Corps' U.S. counsel.

In contrast, Apple's Byrnes said the decision is "really not that significant" and "has no bearing on the merits of the High Court [case]."

Noting that Apple Corps' owners — George Harrison, Paul McCartney, Yoko Ono and Ringo Starr — are "among the richest people in the world," Cooper speculated that if they win, "They may just say [to Apple], 'That's it, guys, you've had your license, now go change your name,' " rather than claiming a paltry $10 million or $15 million a year in license fees. □

Metaphor deal gives Mac run for data access

By Rochelle Garner

Mountain View, Calif. — Metaphor Computer Systems last week announced a joint marketing agreement with IBM under which both companies will sell Metaphor's decision-support software under the IBM label.

The move will mean stiff new competition for the Macintosh as an easy-to-use front end for host data. Metaphor's Data Interpretation System (DIS), like the Macintosh, has its roots at the Xerox Palo Alto Research Center. It combines an iconic interface with connectivity to multiple hosts and databases, such as Oracle running on DEC VAX minicomputers and Sybase running on Sun Microsystems workstations.

DIS will provide yet another graphical interface alternative for IBM users. "We want to be able to use programs written directly for 32-bit Presentation Manager when they appear in late 1990 or early

See Metaphor, next page

Stat companies locked in deadly battle

Abacus, Brainpower in long court duel

By Henry Norr

Oakland, Calif. — A dispute that began more than three years ago as a seemingly routine discussion between a software developer and its publisher about future product plans has in recent months escalated into a bitter legal battle that, in the words of one party to the case, "is really a battle to the death."

The case pits Abacus Concepts Inc. of Berkeley, Calif., developer of the StatView family of statistics programs, against BrainPower Inc., the Agoura Hills, Calif., publisher that — until last month — marketed the first two offerings in the family, StatView and StatView 512+.

The latest round in the long-running dispute centers on a letter BrainPower sent to users of the two programs in October describing a forthcoming BrainPower package called Statalyzer. The letter said that "New developments in design and programming dictate replacement of [StatView]."

Abacus quickly complained that the letter and the development of the new program constituted a breach of a 5-year-old contract that obligates BrainPower to promote the original StatView programs until April of this year. The Berkeley company proceeded to terminate the contract, then in December went to court seeking up to $2 million in damages from its erstwhile publisher.

Abacus has won the first several skirmishes in the legal battle, persuading a state court here to reject BrainPower's request for a change of venue, then to issue a temporary restraining order and later a preliminary injunction barring BrainPower from selling the StatView programs.

But BrainPower President Sherwin Steffin, warning that the case could kill his company, continues to wage a vigorous defense against what he said are "just bullying tactics." In legal papers filed with the

See Abacus, next page

KEN GRANT TUSSY

BrainPower President Sherwin Steffin (right) said Abacus' lawsuit amounts to "corporate terrorism." Dan Feldman of Abacus (above) said the issue is BrainPower's contractual obligation to promote his company's programs.

JIM KNOWLES

Business BRIEFS

Businessland rolls out model ComputerCraft store

San Jose, Calif. — Businessland Inc. last week opened a pilot store here for its ComputerCraft group. The store sports a look that eventually will be found in all ComputerCraft stores. In addition, Businessland described a new strategy under which branch offices, staffed by outbound sales representatives, will service Fortune 1,000 companies, while an expanded chain of ComputerCraft stores will focus on the home and small to midsized businesses. Businessland and ComputerCraft will be run from the same central operation here and, to reduce overhead, both will use the same technical and support staff.

DCA to acquire Pacific Data Products

Alpharetta, Ga. — Digital Communications Associates Inc. announced last week that it will acquire Pacific Data Products Inc., a San Diego-based manufacturer of laser printer enhancement products.

DCA, based here, develops workstation and LAN communications products, including the MacIRMA line of Mac-to-IBM mainframe products. Among other products, PDP markets a cartridge for Hewlett-Packard Co.'s LaserJet printers that includes a PostScript-compatible interpreter. Acquired for $77 million, PDP will become a wholly owned subsidiary of DCA.

T/Maker buys WriteNow source code from NeXT

Mountain View, Calif. — T/Maker Co. now has full ownership of its flagship product, WriteNow for the Mac, and an infusion of capital to help the company grow. For the first time in its 10-year history, T/Maker said this month, it has accepted outside investment, a package of $1.85 million in debt and equity financing, in exchange for 15 percent of the company's stock. The investors are Hummer Winblad Venture Partners, Bryan and Edwards, and Mid-Peninsula Bank.

T/Maker said it purchased an "exclusive perpetual source-code license to WriteNow for Macintosh" from NeXT Inc. All WriteNow development on the Mac is now handled by T/Maker staff, while NeXT will maintain the NeXT version of the product. No other financial relationship exists between the two companies, T/Maker said.

U.S. Robotics gets a BLAST out of Communications Research

Skokie, Ill. — U.S. Robotics Inc. announced that it has acquired Communications Research Group, the Baton Rouge, La., developer of the BLAST family of communications software.

Since its founding in 1976, U.S. Robotics has been a pioneer in the data communications business, with products ranging from low-cost, entry-level modems to high-speed rack-mounted devices for central-site data centers. CRG makes MacBLAST, a $195 asynchronous communications package that supports both standard protocols and the proprietary BLAST (blocked asynchronous transmission) protocol used on CRG software for more than 30 different operating systems.

Hayes to sponsor developers conference

Atlanta — Hayes Microcomputer Products Inc., the industry-leading modem manufacturer, will sponsor a developers conference here next month.

The conference is designed to assist commercial and corporate developers in creating applications for new Hayes technology, such as the Hayes Standard AT Command Set Enhanced for Integrated Services Digital Network, the company said. The three-day event, scheduled for March 27-29, costs $295.

Attendees can register by contacting Pat Cook at (404) 449-8791 by March 12.

Apple lags in race for U.S.S.R. sales

Reforming Reds toe the Blue line

By Richard P. Greenfield

San Francisco — Some U.S. computer companies peeking eastward through the disintegrating Iron Curtain think they can see a potentially significant export market, but Apple apparently is not among them, despite CEO John Sculley's longstanding interest in the Soviet Union.

Digital Equipment Corp. last week announced plans to team up with two Hungarian organizations in a joint venture to sell and service DEC products in Hungary. And more such announcements are expected, especially in the wake of last month's Bush administration announcement that it will join with its Western allies to ease restrictions on high-tech exports to what used to be known as the Communist bloc.

But Apple "has no set plans for a special marketing push in that direction," spokeswoman Stacey Byrnes said. "We do see it as a potential market, but there are several barriers that remain." Until details of the new regulations are released, she said, "It is not yet clear whether Apple's high-end products will be approved for export."

Byrnes also noted that Apple has no distribution network in place in Eastern Europe or the Soviet Union. Even if it did, she said, currency convertibility would remain a problem: Since the Russian ruble and Eastern European currencies are not yet fully convertible to dollars, Apple would need to work out a way to extract earnings from sales in the Communist world, she said.

The obstacles to large-scale Apple exports to Eastern Europe may be even more profound than Byrnes acknowledged, however. "[the Soviets] have made the decision that IBM architecture will be the standard for business and industrial use," said Lee Felsenstein, a partner in Glav-PC Inc., a Berkeley, Calif., company seeking to promote the development of a personal computer infrastructure in the Soviet Union. "The Mac is just a rumor to most people over there."

Felsenstein, a pioneer in this country's personal computer revolution in the 1970s, helped organize the first U.S.-Soviet Personal Computer Seminar, a conference held last month at San Francisco State University.

Sponsored by the U.S.-Soviet Business Institute at San Francisco State's School of Business, the conference brought together American developers and members of the business community with some of their Soviet counterparts. Among the featured speakers were Alexei Pazhitnov, author of the game Tetris, and Leonid Evenko, chief of the department of management studies at the USA-Canada Institute of the Soviet Academy of Sciences.

Evenko cited three factors to explain the Soviets' attachment to the IBM PC standard:

- A longstanding relationship between the Soviet Union and IBM, based on ties built up over several decades as mainframes were installed in the Soviet Union.
- The ready availability of PC clones and components from Asia during the years of tight restrictions in the West.
- The lower cost of PC clones and the wider selection of MS-DOS-based software.

Felsenstein added another factor to the equation: "Apple would have to provide a much higher level of training and support than it does now. The Soviets have to learn everything from the ground up.

"Apple can't just wave its hands and say, 'Go to your dealer,' because there ain't no dealer," he said.

Peter Alexander, Felsenstein's partner at Glav-PC, said precise information about the number of PCs in the Soviet Union is not available, but estimates range from 70,000 to 300,000 machines distributed among a population of 280 million. He said several hundred Macs also are installed, along with thousands of Agats, a Soviet-built Apple II clone used in education.

Felsenstein predicted that Apple, like IBM, might "cut some high-visibility deal with one or two big Soviet enterprises" in the coming months, "but [Apple[has some very serious work to do if it really want to get in there." □

Abacus *From previous page*

court, Steffin contends that his company's "alleged breaches [of the contract] were not substantial, if they existed at all."

In fact, Steffin suggested last week, Abacus' real motive in breaking off the contract may have been to get out of an unusual set of agreements that in effect had the developer paying royalties to its own publisher. The situation arose in 1987 when Abacus decided to publish its own follow-up product for the Mac II, StatView II, even while the marketing agreement with BrainPower remained in effect for the two earlier programs. Abacus President Dan Feldman said the split occurred because BrainPower never adequately marketed and supported his programs; Steffin said it was a result of disagreements about new features.

In 1988 Abacus decided to introduce another program, called StatView SE+ Graphics, ads for which began "We wrote the award-winning StatView 512+ ... Please don't buy it." After prolonged negotiations with its former publisher, Abacus had to make payments to BrainPower for each copy of StatView SE+ that Graphics sold.

Calling the royalty issue a "straw man," Feldman said "The meat of the matter is that BrainPower violated its obligation to market StatView and StatView 512+ to the fullest of its capability." Steffin, on the other hand, said the letter about Statalyzer was sent only to registered owners of the earlier programs and therefore did Abacus no harm.

BrainPower's new $350 Statalyzer package begins shipping this week. But with his company barred by last month's preliminary injunction from selling the StatView programs, and with a final trial perhaps a year away, Steffin acknowledged that BrainPower is in difficult straits. Indeed, he joked, he has contemplated establishing a defense fund so that supporters can help BrainPower defend itself against what he said he "can only call an act of corporate terrorism." □

Metaphor *From previous page*

1991," said David Liddle, president and CEO of Metaphor. "[DIS] will be one of the first environments to really exercise 32-bit OS/2."

In addition, Metaphor will develop Ethernet connectivity software for future IBM products.

DIS currently runs only on Metaphor terminals and on IBM PS/2 machines equipped with a Metaphor board. As part of last week's announcement, Metaphor said it will become a software-only developer, selling its hardware manufacturing operation to employees in a leveraged buy-out. Liddle said the large installed base of 32-bit 80386-based computers enabled Metaphor to migrate from its proprietary hardware, which uses 68000-family processors.

"We will continue to build our present products for current customers until the end of the year, but by year-end we will move all Metaphor software to the PS/2 environment," Liddle said.

Liddle said the company also plans to provide software for other platforms, notably Unix and possibly the Macintosh. □

MarketWEEK

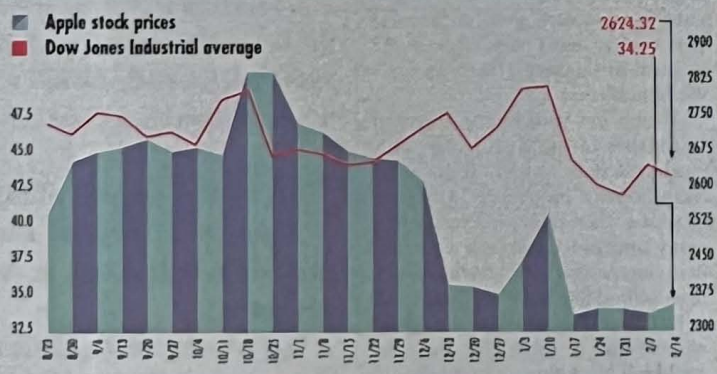
STOCKWATCH

Investors turn to high tech, pushing up Adobe, Aldus

With the government's 30-year treasury financing safely tucked away and with the possibility of lower interest rates emerging, investors cautiously ventured into high-tech stocks during the second week of trading in February.

Beneficiaries included Adobe Systems Inc., which climbed 9.64 percent; Aldus Corp., which rose 5.81 percent in the wake of a 6 percent increase in fourth-quarter earnings per share; and Apple, up 3.01 percent despite the rumored loss of Jean-Louis Gassée and the possible reversal of its largest-ever sale to the federal government.

In contrast, investors shunned Ashton-Tate Corp. after a fourth-quarter loss of nearly $1 million stemming from delays in a new version of its much-criticized dBASE IV software for IBM PCs and compatibles.



Mac-related stocks

	CLOSING 2/7/90	CLOSING 2/14/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	24.63	27.00	9.64	17	30.00	14.00
Aldus Corp.	19.38	20.50	5.81	17	22.50	12.25
Apple	**33.25**	**34.25**	**3.01**	**10**	**50.38**	**31.88**
Ashton-Tate Corp.	11.88	11.00	-7.37	-10	24.00	8.75
Businessland Inc.	7.25	7.25	0.00	13	14.88	6.50
Microsoft Corp.	93.25	95.00	1.88	26	96.00	45.75
Motorola Corp.	58.63	59.13	0.85	15	63.63	39.50
Seagate Technology Inc.	19.00	18.25	-3.95	10	19.63	9.38
3Com Corp.	11.13	11.38	2.25	13	28.75	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	79.13	77.75	-1.74	11	115.63	75.25
IBM Corp.	103.13	103.75	0.61	16	126.00	93.38
Sun Microsystems Inc.	21.75	22.00	1.15	50	23.00	13.00

Compiled by Nesbitt International Inc., Boulder, Colo.

MARKETWATCH

Modular Macs to fuel sales of third-party peripherals

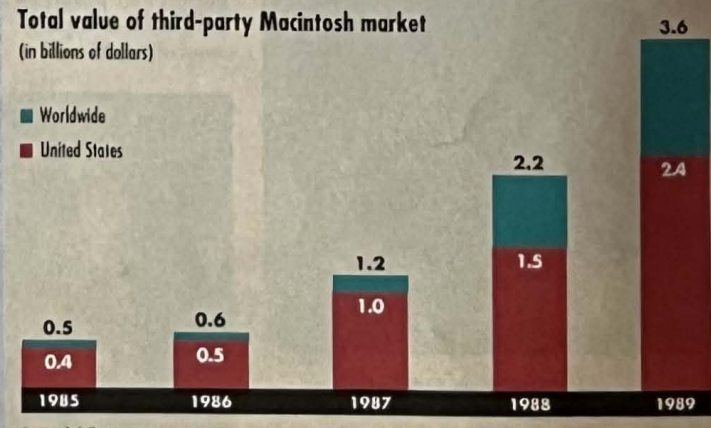
According to InfoCorp, a Santa Clara, Calif.-based research company, purchases of Macintosh third-party products increased 620 percent between 1985 and 1989.

MacWEEK projects that sales of Macs will rise significantly in the 1990 fiscal year, although fewer compact Macs and more modular models will be shipped.

This new mix represents a sizable market opportunity for third parties, since modular Macs require separate storage and display devices.

MacWEEK also projects that in 1990 Apple will ship fewer monitors, hard drives and other peripherals, and concentrate on selling CPUs. — *By Nathalie Welch*

Total value of third-party Macintosh market
(in billions of dollars)



Source: InfoCorp

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HOW TO AVOID THA

T SINKING FEELING.

IF the industry doesn't conform to a more consistent interface design, chances are a lot of programs may not stay afloat. This isn't Chicken Little running around shouting the sky is falling. This is based on exhaustive research distilled from over 6,000 questionnaires. We, at MacWEEK, asked multiple-application Mac users what drives them off the deep end. And the response was almost unanimous. Nine out of ten asked for a simpler, easier-to-use interface.

Deeply concerned about this changing tide, we called together a conference in San Francisco on September 19, 1989 to address the future of the Mac interface design. At ID89, hundreds of developers gathered in hopes of setting down some important guidelines and standards covering menubars, dialog boxes, command-key sequences and tool palettes.

And now this valuable information can be yours, even if you were unable to attend. The ID89 Conference Book includes not only complete documentation of MacWEEK's research, but also videotapes presented at ID89 by Apple Computer and Aaron Marcus, a leading interface design consultant; and complete audio cassettes of the conference proceedings.

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HOW TO BE CONSISTENT FROM INTERFACE TO INTERFACE.

ID89 MacWEEK

Apple tightens security screws

The Knife reports that, in the grand tradition of Nicolai Ceausescu, Apple has a clause in its leaky non-disclosure agreement that requires any non-disclosed individual who hears anyone discussing Apple secrets to report the incident. Unlike most paranoid totalitarian regimes, however, Apple is offering a $25,000 reward for forthcoming snitches. In Apple engineering speak, that's .06 of a Graz ($1.5 million), named after Joseph A. Graziano, Apple's chief financial officer and recipient of a hefty signing bonus last year.

If the IIxi turns out to be the success that Apple hopes (about 13,000 units are projected to ship by May), it should contribute considerably to Apple's bottom line, thanks to a significant reduction of parts. The Knife reports it will have eight new ASICs on board, including a memory controller, bus interface chips, peripheral interface controllers (both SCC and SWIM), operating system support and SCSI. Fewer parts mean it will be cheaper to manufacture than earlier models of open-architecture Macs. Given the estimated $10,000 retail price, the margin should keep the financial officers smiling.

Apple also has great expectations for the new graphics accelerator card, if the volume of Am29000 RISC processor chips it plans to buy is any indication. Sources tell the Knife that Apple is expecting to order a cool quarter million of the chips from manufacturer Advanced Micro Devices over the next 12 months.

Management chaos is not expected to affect the announcement of the Mac IIxi, which is scheduled for March. Sources close to Apple state that the announcement will reflect the fine hand of Michael Spindler, who is thought to be behind the movement at Apple in support of one-year warranties. Barring a last minute change of plans, Apple will announce the 12-month warranty policy on CPUs and the IIxi concurrently. The sources also tell the Knife that the Apple IIc Plus will be discontinued next month, although no announcement will be made for some time.

Parting shots. Judging from Jean-Louis' illuminating remarks the Knife conveniently overheard recently, the Frenchman does indeed intend to step down as Apple USA president. "I'm not concerned that I lost marketing and manufacturing. I'm really not concerned about the size of any appendages, but I am tired of worshiping at the altar of the marketing gods." He went on to observe that, in his opinion, Allan Loren wasn't the problem but a symptom of the problem. In any event, he continues to provide candid appraisals of what's turning into a sticky situation.

Another Adobe jewel. Adobe's acquisition binge shows no sign of slowing. The latest Mac developer to be swallowed up courtesy of Adobe's rather remarkable stash of cash is Emerald City Software. The Knife has learned that a letter of intent to purchase the company has been signed. Sources say Emerald City management is excited about the acquisition, and since Adobe plans to expand the Emerald City operation in Menlo Park, there are probably some happy real estate agents also.

Suitor found? Patrick J. Silvagnia, Jasmine president, recently wrote to the company's vendors admitting that the company "is experiencing some financial difficulties." That probably explains the avalanche of complaints the Knife has been receiving about sluggish Jasmine technical support. The good news is that at least a couple of suitors, including one major drive manufacturer and a well-known executive flush with cash from his company's public offering, are thought to be actively considering a significant investment in Jasmine. An infusion of cash from anyone, even Ivana Trump, would lead to the resolution of Jasmine's problems in short order.

Back in the U.S.S.R. Just in case you weren't taking the changes in the Soviet Union seriously, consider this. The Kremlin Politburo has standardized on the Mac for desktop publishing and is rumored to be negotiating with Apple Europe for the purchase of thousands of Macs. Most likely, Apple won't be receiving rubles for them. □

No matter how broken up you are about the Donald and Ivana, don't forget to get yourself a MacWEEK mug. A usable tip is all we ask. Call the Knife at (415) 243-3500 or MCI (MactheKnife).

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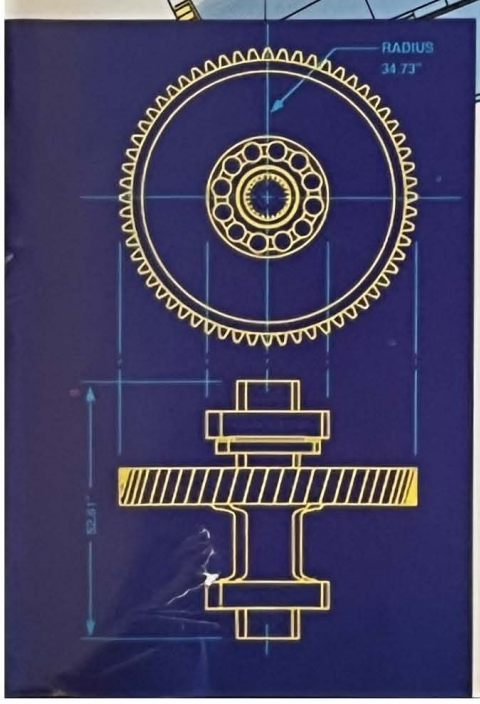

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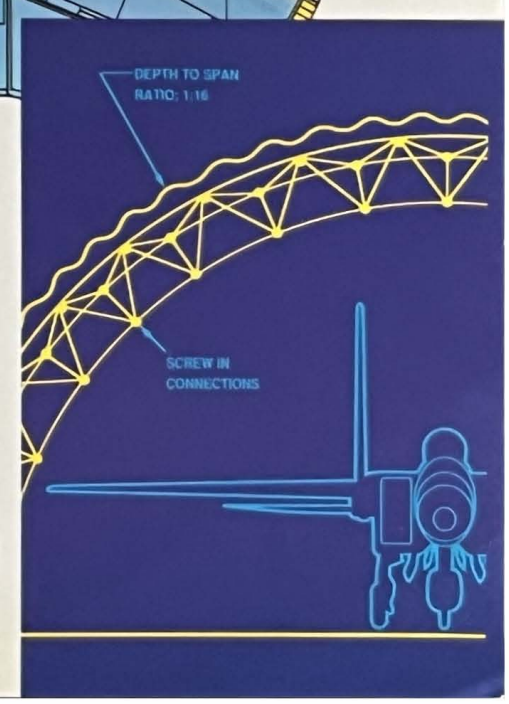

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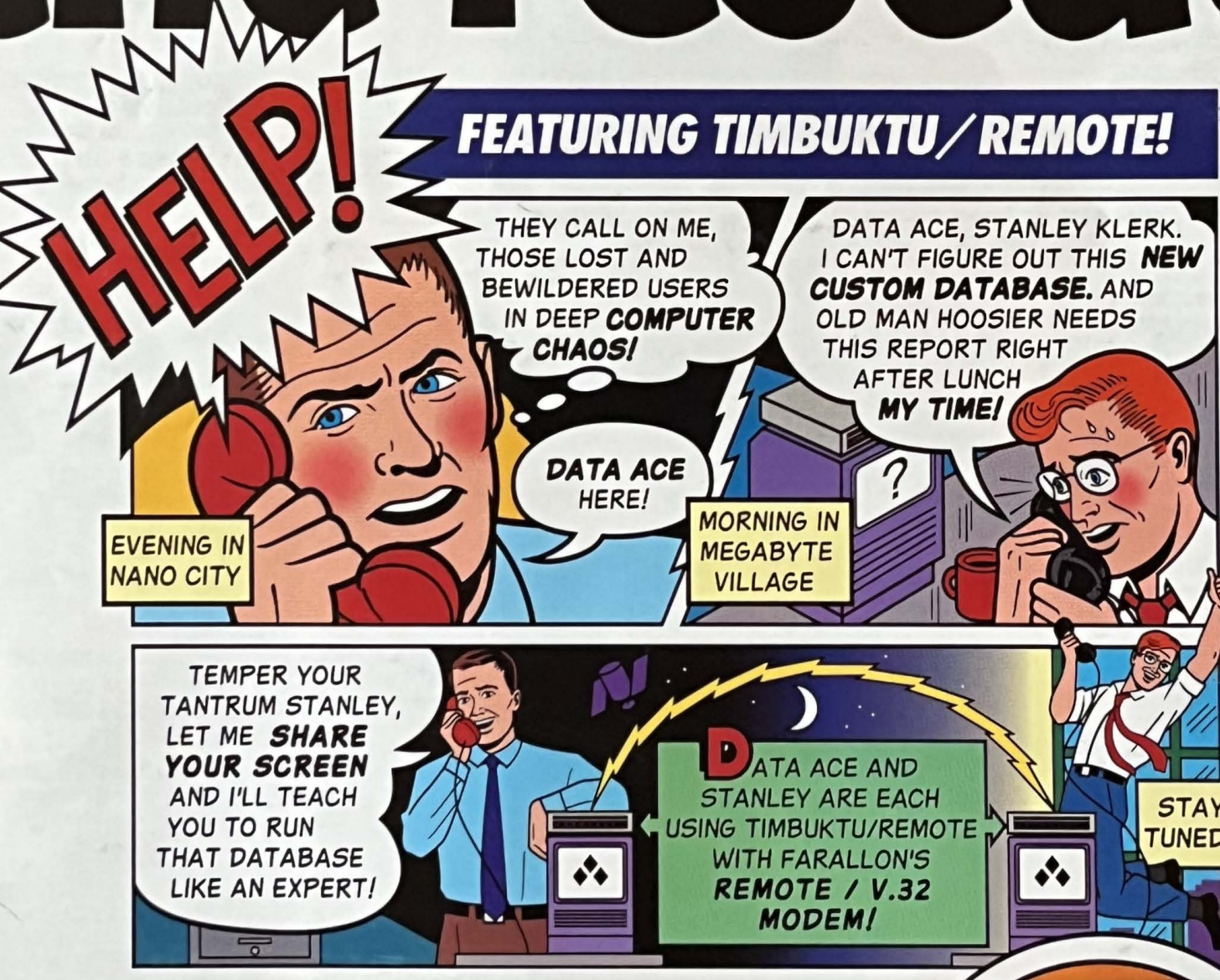
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